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DEPARTMENT OF HUMAN RESOURCE MANAGEMENT

“Modelling career success: the influence of personality and  
inter-personal processes”

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## ABSTRACT

The pattern of relationships between three sets of variables and gender differences in these variables were investigated. The sets of variables were personality traits, mentoring and networking, and career success. The investigation took place in an organisational context that did not appear to be male-dominated. It was expected that certain personality traits would increase the likelihood to report mentoring and participation in organisational networks, which, in turn would enhance objective and subjective career success. It was also expected that women would report more mentoring and networking, which would reflect on gender differences in career success. Questionnaire data from 272 individuals (199 women and 73 men) who were clerical and administrative employees in organisations from the British higher education sector were analysed. Hierarchical regression analysis and causal path analysis based on least squares regression were the main data analytic techniques. In general, the expectations regarding the pattern of relationships were confirmed. Personality exerted both direct and indirect effects on objective career success and on subjective career success. Networking exerted direct effects on objective career success and indirect effects on subjective career success, through its effects on objective career success. Mentoring exerted direct effects on subjective career success and indirect effects, through its effects on networking, on objective career success. Provision of mentoring was affected by reception of mentoring, but its effects on career success were not of particular substance. The implication of the findings is that objective career success exerts positive effects on subjective career success, but fostering a mentoring culture in an organisation can improve employees' feelings about their careers in a more effective way than offering organisational rewards such as promotions. Regarding gender differences, according to the expectations, women reported more mentoring, networking, and provision of mentoring and more subjective career success, but men reported more promotions and higher grades. The analysis suggests that elimination of male dominance in numerical terms may not be a sufficient condition for the elimination of gender differences in career success. Cultural shifts and changes in procedures and processes (e.g., promotion process, committee composition) may also be needed. A number of limitations, especially the cross-sectional nature of the study, exist. Finally, an important implication is that there may be a clash of interests between individual employees who want to advance their careers and organisations which should benefit most from committed employees and meritocratic procedures in the allocation of rewards. More research across organisational types and contexts (e.g., self-employed individuals) is suggested.

## CHAPTER 1: INTRODUCTION

## CHAPTER 1. INTRODUCTION

### 1.1 RESEARCH AIMS

The first aim of the present work is to develop a causal model linking personality and interpersonal variables as antecedents of career success. The model aims at causally linking three variable sets: personality traits, interpersonal relationship variables (mentoring, provision of mentoring and networking) and career success, which is conceptualised and measured in terms of objective and subjective career success. The scarcity of and the need for the development of quantitative models for career success is stressed by authors in the field (Tharenou, *et al.*, 1994; Turban & Dougherty, 1994), hence, the significance of the present contribution. Inherent in the development of the model is the development of gender-specific models, as gender has been identified as the most potent moderator of career success and attempts to model career success with causal modelling techniques strongly directed to the development of gender-specific models along with the general models (e.g., Melamed, 1995a; 1996b; Tharenou, Latimer & Conroy, 1994). The second aim is the investigation of gender differences in career success and the inter-personal relationship variables of mentoring and networking in a non-male dominated organisational environment. There are a number of, inter-related, reasons for pursuing this investigation: (1) studies that investigate the phenomenon of career success are incomplete without considering gender differences, because gender is the most potent antecedent of career success (e.g., Kanter, 1977; Melamed, 1995a; 1995b; 1996b); (2) the extensiveness and quality of informal inter-personal relationships in the workplace (e.g., development of relationships with mentors and participation in organisational networks) are among the major factors that contribute to gender differences in career success (e.g., Cannings & Montmarquette, 1991; Ibarra, 1993); (3) organisational male dominance has been considered as the main reason for the alleged lack of female participation in mentoring relationships and networks, which is, in turn, reflected in women's career success which lies behind the career success of their male counterparts (e.g., Ibarra, 1993; Kanter, 1977). Therefore, a unique contribution is made



by investigating gender differences in career success in an, apparently, non-male dominated organisational environment.

## OVERVIEW

### *Career Theory*

Kram's (1988, p. 68) consideration of career as a "series of job-related activities through all or part of adult life that build on one another and are concerned either with an organisation or an occupation" provides an illustrative and concise definition of career. Despite the trends in organisational restructuring and the increasing importance of career outside the limits of a single organisation (e.g., Arthur, 1994; Arthur & Rousseau, 1996) career and advancement within a single organisation remains of primary importance from the individual and the theoretical viewpoint (e.g., Orpen & Andrews, 1993).

The major approaches in the study of careers include the human capital, the structural and the career stage approach. The human capital approach considers the contribution of social factors (e.g., socio-economic background, education, work experience) on career outcomes (e.g., Becker, 1964; Mincer, 1974). The structural approach represents a kind of reaction to the human capital approach and considers the importance of structural factors, that is factors located outside and which are out of the control of the individual (e.g., Haberfeld, 1992; Sonnenfeld, 1989). Structural factors include organisational variables (e.g., organisational size) (e.g., Melamed, 1995a; 1996a; 1996b), environmental variables (e.g., type of industry) (e.g., Gunz, 1988) and societal variables (e.g., the educational system) (Reilly, 1994). The career stage approach considers different stages in the individual's career progression; stages that depend on changing needs, competencies and values over the course of the lifetime (e.g., Hall, 1981; Super, 1957; 1980). The career stage approach can aid in understanding the development of inter-personal relationships in the organisational environment. The approaches are complementary, as empirical work suggests that use of factors adhering to different approaches offer a more complete picture of career outcomes than exclusive use of factors that represent just one of the approaches (e.g., Melamed, 1996a; 1996b; Shackett & Trapani, 1987; Tharenou, *et al.*, 1994).

The tournament model of career progression (Rosenbaum, 1979) involves an integration of the structural and the individualistic (e.g., human capital and career stage) approaches (Sheridan, Slocum, Buda & Thompson, 1990). Two of the important notions in the model include the notion of signal (Spence, 1973) and the notion of visibility to upper-level decision makers as factors which can influence decisions regarding the allocation of organisational rewards, hence, career advancement (Forbes, 1977). An important assumption in the context of signalling and visibility is that there are few objective criteria on which senior organisational members can base their evaluations and that decision makers usually engage in limited search for candidates to fill organisational posts (e.g., Forbes, 1987; Rosenbaum, 1979; Sheridan, *et al.*, 1990). This consideration is enhanced by suggestions that promotion decisions are made on the basis of subjective information (e.g., Stumpf & London, 1981). There are problems with the model both at an empirical level (i.e., it is not exhaustive) (e.g., Forbers, 1987) and at a conceptual level (i.e., it does not provide an account of the determinants of success in each tournament). The importance of the model, however, is that, through the notions of signalling and visibility, it directs towards the consideration of informal interpersonal relationships as factors that can influence the outcomes of each tournament (e.g., the outcomes of bidings for promotion), hence career success.

The concluding point is that major approaches to career progression, whether they are considered in isolation, in combination, or integrated into more general models, cannot offer a full explanation for individual differences in career outcomes (e.g., Ferris & Judge, 1991; Pfeffer, 1989). Informal interpersonal relationships, in terms of establishing relationships with mentors and participation in informal organisational networks, must be incorporated in the study of career progression for a more complete picture to emerge (e.g., Cannings, 1988; Cannings & Montmarquette, 1991; Cox & Harquail, 1991; Ferris & King, 1991; Kanter, 1977; Meyerson, 1994; Olson & Becker, 1983; Pfeffer, 1989; Whitely, Dougherty & Dreher, 1991). These phenomena, mentoring and networking, and their relationship must, therefore, be discussed.

## *Career Success*

The notion of success or failure is inherent in the conceptualisation of career (e.g., Hall, 1976). Two major perspectives in the conceptualisation and operationalisation of career success exist: objective career success and subjective career success. The traditional consideration of career success relates to the concept of objective career success, which refers to the career judged from an external perspective or reference point (e.g., Gattiker & Larwood, 1988; Van Maanen & Schein, 1977). The emerging trend in the career success literature, however, is the consideration of career in subjective along with objective terms (e.g., Gattiker & Larwood, 1988; 1990; Peluchette, 1993). Subjective career success refers to the views of career from the perspective of the individual (Gattiker & Larwood, 1986; 1988). Objective and subjective career success, although related, do not coincide (e.g., Korman, 1980; Nicholson, West & Cawsey, 1985; Schneer & Reitman, 1990; 1994; Van Maanen & Schein, 1977). The restructuring of organisations that has been causing traditional career patterns to change makes the consideration of subjective career success along with objective career success imperative (e.g., Inkson & Koe, 1993).

The variables that have been most researched as antecedents of career success include structural variables and individual-level variables. Structural variables include organisation size and structure (e.g., Brown & Medoff, 1989; Spurr, 1990; Pierce, 1990); type and state of the industry (e.g., Gunz, 1988; Melamed, 1995b; 1996a; Olson & Frieze, 1987; Reilly, 1994); and organisational strategy (Slocum, Cron, Hansen & Rawlings, 1985). Individual level variables include: age (e.g., Cannings, 1988; Cox & Harquail, 1991; Melamed, 1995b); educational attainment (e.g., Gould & Penley, 1984; McClelland & Franz, 1992; Gattiker & Larwood, 1988; 1990); socio-economic origin (e.g., Pfeffer, 1977; Useen & Karabel, 1986; Whitely & Coetsier, 1993); marital status (e.g., Gattiker & Larwood, 1988; Pfeffer & Ross, 1982; Schneer & Reitman, 1990); organisational tenure (Cox & Harquail, 1991; Gerhart, 1990; Nkomo & Cox, 1990); and starting organisational level (e.g., Cox & Harquail, 1991; Tucker, 1985). Finally, considering the literature, (e.g., Feldman, 1989; Gattiker & Larwood, 1988; Melamed, 1996a; O'Reilly & Caldwell, 1981; Pfeffer & Lawler, 1980), career choices at an intermediate level (e.g., after joining a particular organisation) cannot offer reliable and

valid predictions for career success variables. Research on variables that relate to objective career success is considerably more extensive than research on variables that influence subjective career success.

The most well researched variable in the career success literature is gender. Women achieve less in terms of objective career success (e.g., Cannings & Montmarquette, 1991; DiPrete & Soule, 1988; Olson & Becker, 1983; Schmeer & Reitman, 1994; Tharenou, *et al.*, 1994); but women report subjective career success levels that are equal to or higher than the levels that their male counterparts report (e.g., Cox & Harquail, 1991; Cox & Nkomo, 1991; Melamed, 1995b; Schmeer & Reitman, 1990; 1993; Whitely & Coetsier, 1993). Suggestions to explain the observed gender differences in objective career success, mainly focus on different career and family priorities, different career expectations, and different career and educational paths (e.g., Gerhart, 1990; Mincer & Ofek, 1982; Rothwell, 1986). These explanations, however, cannot offer a complete account for all the observed differences in objective career success (e.g., Melamed, 1995b). Hence, a number of authors stress the contribution of informal interpersonal relationships, in the form of relationships with mentors and participation in informal organisational networks, and gender differences in objective career success (e.g., Adler, 1993; Cox & Harquail, 1991; Fagenson, 1990; Melamed, 1995b). This suggestion is complemented with the view that the negative effects of interpersonal relationship variables on women's career opportunities are related to the extent of organisational male dominance (e.g., Chused, 1988; Cox & Harquail, 1991; Kanter, 1977; Northcraft & Gutek, 1993). Therefore, gender differences in career success, mentoring and networking must be investigated in non male-dominated organisational environments (e.g., Aryee, *et al.*, 1996; Ibarra, 1993). Furthermore, gender-specific models of career success must be developed along with the general models (e.g., Melamed, 1995a; 1996b; Shackett & Trapani, 1987; Tharenou, *et al.*, 1994).

### *Mentoring and Networking*

Mentoring in the organisational environment is conceived as a relationship between a more senior organisational member, the mentor, and a less experienced organisational member, the protégé, in which a number of career-related (e.g., career

guidance, exposure and visibility) and psychosocial (e.g., friendship, acceptance and confirmation) functions are provided (e.g., Kram, 1983; 1988; Schockett & Haring-Hidore, 1985). An important distinction is that between primary or classical mentoring, which involves a long-duration one-to-one relationship, and secondary mentoring, which involves a shorter, less intense and functionally narrower relationship (e.g., Phillips-Jones, 1982; Zey, 1984). Considering the stages in and the reasons for the development and decline of a mentoring relationship, for a mentoring relationship to fully develop there is a need for a considerable amount of time (Kram, 1983; 1988).

A considerable amount of research identified mentoring as a positive contributor to protégés' career success, objective career success and subjective career success, proposing mechanisms through which these effects are exerted (e.g., increase in visibility) (e.g., Aryee & Chay, 1994; Dreher & Ash, 1990; Hunt & Michael, 1983; Kram, 1988; Scandura, 1992; Turban & Dougherty, 1994; Whitely & Coetsier, 1993). The suggestion that mentoring also exerts positive effects on the career success of the mentor (e.g., Dreher & Ash, 1983; Kram, 1988) lacks empirical investigation though.

As in the case of career success, structural (e.g., organisational structure) and human capital (e.g., socio-economic origin) factors enhance or inhibit the development of mentoring relationships (e.g., Deal & Kennedy, 1982; Kram, 1988; Whitely, *et al.*, 1991). Authors suggest that women encounter more problems in establishing relationships with mentors and they receive mentoring of lower quality (e.g., Betz & Fitzgerald, 1987; Hunt & Michael, 1983; Kram, 1988 Morrison, 1992; Tharenou, *et al.*, 1994). These suggestions, however, have been made under the consideration that organisational hierarchies are male-dominated, therefore, it is important to investigate gender differences in mentoring in non-male dominated hierarchies.

Networking is an integral part of organisational life,(e.g., Pfeffer, 1982). The type of networking that is of interest in the study of career success is that which refers to emergent or informal organisational networks, that is relationship ties that are not necessarily described by the organisational chart (e.g., Ibarra, 1993). Peer relationships, which include information, collegial, and special peers, must be considered in the context of networking (Kram & Isabella, 1985). As in the case of mentoring, authors have highlighted the importance of networking for career success in the organisational

environment, proposing mechanisms (e.g., increase in visibility) through which networking affects career success (e.g., Amatea, 1991; Brass, 1985; Cannings & Montmarquette, 1991; Fombrum, 1983; Kram & Isabella, 1985; Lincoln & Miller, 1979; Morrison & Von Glinow, 1990; Roberts & O'Reilly, 1979). Empirical research investigating the relationship between networking and career success, although it exists (e.g., Cannings & Montmarquette, 1991; Luthans, Rosenkrantz & Hennessey, 1985; Peluchette, 1993) is limited, especially with respect to subjective career success. There is limited amount of literature linking networking with structural and individual characteristics (e.g., Cotton, 1994; Tichy, 1981). As in the case of mentoring, authors suggest that women are not integrated into informal organisational networks (e.g., Cannings & Montmarquette, 1991; Gaskill, 1991; Ibarra, 1993; Melamed, 1995b; Nieva & Gutek, 1981; Tsui & O'Reilly, 1989). It is pointed again, however, that the considerations and empirical evidence regarding gender differences in participation in and utilisation of networks are based on the consideration that women find themselves in male-dominated organisations.

Considering the relationship between mentoring and networking in light of the related literature (e.g., DeFillipi & Arthur, 1994; Dreher & Bretz, 1991; Fagenson, 1988; Granovetter, 1973; Ibarra, 1992; 1993; Keele, 1986; Kram, 1988; Kram & Isabella, 1985; Tichy, 1991), mentoring and networking are related, but distinct phenomena, which, however, have unclear boundaries. Regarding the issue of causality between mentoring and networking, the characteristics of the organisation must be taken into account, though in the majority of contexts the relationship must be initiated from mentoring.

### *Personality*

The next theme regards the relationship between personality, mentoring and networking and career success. Before this, however, the issue regarding the role of personality in the organisational environment, along with the relatively long-lasting rejection of personality as a valid means of prediction in the organisational setting must be discussed (Barrick & Mount, 1993; Bernardin & Beatty, 1987; Epstein & O'Brien, 1985; Guion, 1965; Hogan, 1991; Mischel, 1968; 1977; Roberts, Hulin & Rousseau, 1978; Schneider, 1987). Personality, in combination with situational and structural

variables, does play an important role in organisational behaviour outcomes. Furthermore, organisational behaviour outcomes, such as career outcomes, that encompass a number of experiences, acts and behaviours are most likely to reveal the impact of personality (Bell & Staw, 1989; Schneider & Hough, 1995). An important point that has been made by Furnham (1992) refers to the lack of adherence to an established trait-taxonomy in the use of personality in organisational behaviour research. The use of the Big-Five factor model of personality (e.g., Tupes & Christal, 1961/1992) should considerably resolve this problem.

The studies that have investigated the relationship between personality and indices of career success, predominantly objective career success, contain inconsistencies in the use of personality traits, measures, samples and criteria which are mostly of unsystematic nature (e.g., Chakrabarti & Kundu, 1984; Eysenck, 1967a; Harrell & Alpert, 1989; Lynn, 1969; Melamed, 1996a). The mostly equivocal and weak nature of the results contributes to the building of the argument that personality may not bear a strong direct relationship with objective career success. Rather, it may be related to interpersonal relationship variables, especially mentoring and networking, which, in turn, exert effects on career success.

There is literature that provides suggestions regarding a relationship between personality and mentoring, including provision of mentoring (e.g., Fagenson, 1989; Kanter, 1977; Kram, 1988; Rice & Brown, 1990; Scandura & Raggins, 1993). Similarly, there is some, even rarer, literature that presents suggestions and evidence regarding the relationship between personality and networking (e.g., Cannings, 1988; Tichy, 1981; Peluchette's; 1993). Therefore, the investigation of the relationship between personality and measures of mentoring and networking will contribute to the closure of a gap in the literature.

### *Methodology*

The aims of the thesis are twofold: to develop causal path models linking personality, mentoring and networking with career success and to investigate gender differences in mentoring, networking and career success in a non-male dominated organisational environment. The investigation conforms to the classic personality theory

and the classic organisational behaviour research design approaches to the role of personality in the work environment, which treat personality variables as independent variables and career success as dependent outcome variables (Furnham, 1992). The main decisions that were made are the following:

The Big-Five trait-taxonomy of personality, which has gained universal approval (e.g., Digman, 1990; McCrae & Costa, 1987) was adhered to. Personality was operationalised with the global factors of the Cattell 16PF5 (Cattell, Cattell & Cattell, 1993) that conform to the Big-Five factors of personality.

Structural variables, human capital, career stage and work involvement were controlled for. Control for structural variables was achieved by means of the design of the investigation, which was conducted in organisations located in the same geographic region, being in the same sector, involved in the same type of business, employing very similar hierarchical structures and having identical promotion procedures. Control for human capital, career stage and work involvement was achieved by means of statistical controls in the analysis part of the investigation.

Cross-sectional research design was adopted. The time demands imposed by a longitudinal investigation, which would allow for safer conclusions regarding causality relationships, made it unrealistic. Nevertheless, cross-sectional designs are adequate for initial investigations in an issue, as in the present work (e.g., Spector, 1981).

A questionnaire was used to collect the data. Reasons for this include the use of personality as a main variable in the investigation and the calls for quantitative investigations, where concrete models are developed and tested, in career research (e.g., Feldman, 1989; Fisher, 1986; Tharenou, *et al.*, 1994).

The decision to employ a homogeneous sample was considered against the employment of a heterogeneous sample (i.e., individuals from a variety of organisations). The enhanced external validity of the latter design must be compromised for the internal validity of the results, because the greater certainty for a valid result in a limited setting is preferred over a generalisable result of dubious validity. A valid result can be tested for generalisation in other settings.

Clerical and administrative employees from three British Universities were employed as the sample, because organisations from the public educational sector are the



least likely to be male-dominated (e.g., Melamed, 1995a). Considering clerical and administrative employees in all three organisations, the ratio of men to women in middle and high grades approximates one to one, whilst in the lower grades it is in favour of women at a ratio of one to four.

The main point that relates to the measures that were used in the investigation is the decision to construct scales to measure networking and provision of mentoring, due to the lack of adequate relevant measures. Objective career success was operationalised in terms of the number of promotions that the respondents have received since they joined their work organisation, because measures that are based on hierarchical position, especially promotions, are best suited for indices of objective career success when careers in a single organisation are considered (e.g., Cox & Harquail, 1991; O'Reilly & Chatman, 1994).

Finally, in the formulation of the expectations the following decisions about causality were made: (a) considering the organisational setting where the investigation took place, mentoring should exert effects on networking and not vice versa; and (b) objective career success should exert effects on subjective career success.

### *Analysis*

Principal components analysis and hierarchical regression analysis were the main statistical techniques used for the analysis of the two hundred and seventy two responses (199 from female and 73 from male respondents). The data were scrutinised for suitability (e.g., linearity and additivity assumptions, homoscedasticity assumption, no autocorrelation assumption). Furthermore, the newly developed scales for measuring networking and provision of mentoring demonstrated discriminant and construct validity.

Two stages were involved in the first part of the investigation. In the first stage, models for the prediction of objective career success, subjective career success, mentoring, networking and provision of mentoring were developed by means of a series of hierarchical regression analyses using control variables. The suggestions that are made by these models were used in the second stage. This involved the development of the causal path models because, due to the very definition of causal path analysis, control variables cannot be used in the regression equations on which the development of the

causal path models is based. Overall, six significant causal path models were developed. A part of the thesis was the modification of the procedure for testing for model data fitting (Specht, 1975) in a way that increased confidence over the significance of the causal path models. The causal path models generally confirmed the expectations.

The results relating to gender differences were also in line with the expectations. Women reported significantly more mentoring, networking, provision of mentoring and higher scores on subjective career success. However, they lagged behind men in objective career success terms. The percentage of variance in the gender difference in the career success indices reached the 90% levels for number of promotions and subjective career success.

### *Conclusions and Significance of the Investigation*

The aims of the investigation were achieved, the results confirming the great majority of the expectations. The causal models “fit” the particular organisational context and provide insight to issues regarding the mechanisms for the determination of objective career success and subjective career success and the reasons for the observed gender differences in these factors. A number of conclusions are drawn which lead to suggestions for human resource and individual tactics and strategies and suggestions for further research to expand the present investigation.

The general pattern of the relationships of the variables that were used for control purposes was in line with the pattern reported in the literature. Human capital variables are predictive of objective, but not of subjective career success. In contrast to previous findings, however, class of social origin made a negative contribution to objective career success, a result that was explained by taking into account the organisational context. The compatibility of the present results with those of previous research are suggestive of the validity of the investigation, but also of contextual influences.

The major points regarding inter-variable relationships that were made by the results are the following: subjective career success is affected by objective career success; however, the effects of mentoring on subjective career success are much stronger than the effects of objective career success; mentoring and networking exert their main effects on subjective and objective career success, respectively; Tough-

Mindedness exerts direct effects on objective career success, a relationship which is, however, moderated by gender; Anxiety and Independence, exerts direct effects on subjective career success; Extraversion and Tough-Mindedness exerts direct effects on networking and mentoring, respectively; finally, provision of mentoring exerts only weak effects on career success. The results largely confirm the expectations, are in line with suggestions, implications and previous empirical findings, and justify the reasoning behind the investigation.

Several suggestions can be made on the basis of the results on gender differences: First, gender balance in the middle and upper organisational levels may be a necessary step towards reducing and eliminating male-dominance, but it is not sufficient, at least in the short and medium terms, because gender numbers ratios in the upper organisational levels must not be considered a definite index of power distribution between genders in the organisation. Furthermore, introduction of equal opportunities legislation cannot by itself resolve the problem of gender inequality in the allocation of organisational rewards. Reconsiderations and restructuring of the processes and procedures by which organisational rewards are distributed are needed for the introduction of measures which go below the “surface”. Second, in line with literature suggestions, women do not distinguish formal from informal organisational procedures, such as networks, seeming rather unaware of the importance of the latter for obtaining organisational rewards. Third, some of the results (e.g., the stronger effects of objective career success on women’s than in men’s subjective career success) imply that a shift away from organisational male dominance may lead to changes in “traditional” facts and processes, such as the relative importance that women and men place in their careers.

A number of limitations and threats to the validity of the investigation exist. These include: (a) the cross-sectional nature of the study, which limits confidence regarding the validity of the causality relationships, even though the causal models “fit” the present organisational context; (b) the possibility of method variance that may have distorted estimations of the strength of the relationships; and (c) the validity of the instruments. Future research should avoid some or all of these potential problems.

The study, though illuminating, is by no means exhaustive. Suggestions for further investigations include: the use of trait-specific variables or variables that relate to

impression management as moderators; research with individuals engaged in “boundryless” careers (e.g., part-timers, contractual employees); research in organisational contexts where formal mentoring systems are used; identification of mediators (e.g., mechanisms) in the paths between personality traits and the inter-personal relationships variables; investigation of other political tactics in the framework of the present models; extension of the investigation in other organisational contexts (e.g., the private sector); and extension of the investigation in other national cultural contexts.

Finally, in light of the present investigation, a number of suggestions about some contemporary organisational issues can be made including: the issue of introducing formal mentoring systems, where it appears that fostering a mentoring culture is a more effective, albeit more difficult, tactic for the benefits of mentoring to be realised; the advantages and disadvantages of the use of informal inter-personal procedures for individuals and for organisations, where it appears that benefits at an individual level may be translated into detriments at an organisational level; and actions from an organisational and individual point of view (e.g., by women themselves) in order to achieve reductions in the observed gender differences in the allocation of organisational rewards.

## CHAPTER 2: CAREER THEORY

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### 2.1 CAREER DEFINITION

Career can be defined as the evolving nonstochastic sequence of a person's work experiences across space and time (Arthur, *et al.*, 1989, p. 8; Kram, 1988, p. 68; Van Maanen & Schein, 1977, p. 31).

Work experiences refer to individuals' accumulated experiences which are derived from their work. Such experiences and their meaning may develop from encounters with other individuals in the context of work, organisational cultures, and societal norms regarding work.

Space refers to the environment or context (e.g., societal, occupational, organisational) where the career evolves (Melamed, 1996b). It has been stressed that the career should be considered in the context of the "institution", which has been conceptualised as a social phenomenon in which collective behaviour is conducted in a relatively established way (Arthur, *et al.*, 1989; Hughes, 1971). The importance of considering careers within "institutions" rests on the significance (e.g., societal values) that is attached to them (Arthur, *et al.*, 1989). A typical case of an institution is the work organisation with its organisational hierarchy.

The notion of time implies that career is not of static quality. It should be viewed as having the quality and characteristics of motion. Motion implies a dynamic interaction between the individual and the surroundings, such as the work environment and the society (Arthur, *et al.*, 1989). Of course, social space and time must be considered in relation to each other and not in isolation (Arthur, *et al.*, 1989; McHugh, 1968).

Kram (1988, p. 68) has provided a useful working definition of career as a "series of job-related activities through all or part of adult life that build on one another and are concerned either with an organisation or an occupation". This definition is very similar to the one presented at the beginning of the present section.

Career management is considered of ever increasing importance for individuals and organisations (Derr, 1986; Feldman, 1989; Schuler & Jackson, 1987; Sonnenfeld,

1989). The study of careers has led to the formulation of tactics and strategies concerning career management at both the individual and the organisational (e.g., human resource management and policy) level (Derr, 1986; Feldman & Weitz, 1988; Feldman & Brett, 1985; Ference, Stoner & Warren, 1977; Pinder & Das, 1979; Schein, 1978). The design and implementation of career-oriented human resource management systems have been recommended as mechanisms to improve organisational competitiveness (Von Glinow, Driver, Brousseau & Prince, 1983; Schuler & Jackson, 1987). Organisations tend to incorporate career systems into their strategies even if this is not stated explicitly (Sonnenfeld, 1989).

A number of authors have adopted other terms instead of "career", considering those other terms as more global. Such terms include "working lives" (Shamir & Salomon, 1985) or "work histories" (Nicholson & West, 1985; 1989). However, the "traditional" term is adopted in the present work. This term is adequate as most individuals are familiar with it. Furthermore, this term is used in the great majority of the literature and has been used as part of other related concepts (e.g., career success).

## 2.2 PERSPECTIVES ON CAREER PROGRESSION

There are a number of different approaches which aim at explaining and predicting individual career progression. Each approach focuses on qualitatively different variables including sociological [e.g., human capital approach (e.g., Becker, 1964; 1975), structural approach (Spilerman, 1977)], environmental (e.g., structural approach) and individual [e.g., career stage approach (Super, 1957)].

Furthermore, there are a number of sociological theories [e.g., Marxism (Marx, 1887/1972), Social Functionalism (Davis & Moore, 1945), Industrialism (e.g., Kohn & Schooler, 1973)] and psychological theories [e.g., theories of knowledge acquisition (e.g., Dreher & Bretz, 1991; Hunter, 1986), expectancy theories of motivation (e.g., Porter & Lawler, 1968; Vroom, 1964)] which could be referred to as making direct or indirect predictions about career and career success. These theoretical frameworks, however, did not aim at the investigation and explanation of career related phenomena. Simply, some of their concerns (e.g., the relationship between social class and income)

relate to the concerns and investigations inherent in career theories. For this reason, these theories are not presented.

Authors provide different classifications of approaches in the study of careers [see, for instance, Arthur, *et al.* (1989), Rosenbaum (1989), Sonnenfeld and Kottler (1982)]. The following categorisation, however, incorporates most of the major trends in the study of careers: the human capital approach (e.g., Becker, 1964; 1975), the structural approach (Spilerman, 1977), and the career stage approach (e.g., Super, 1957; 1980). Furthermore, the tournament model of careers (Rosenbaum, 1979) incorporates elements of all these approaches. An analytic presentation of these approaches follows.

Before progressing it should be noted that the psychological/dispositional approach could be added to the above approaches. This approach considers inter-individual dispositional differences and their effects on the career “shaping” of the individual (e.g., Harrell & Alpert, 1989; Holland, 1973; 1985; Schein, V.E., 1975; 1978; Strong, 1943). The variables that relate to this approach, however, can be incorporated either in the personality framework or to the subjective career success concept which is concerned with perceptions about particular career related facts. Both of these frameworks are discussed in the present work.

### 2.2.1 HUMAN CAPITAL APPROACH

The human capital approach (e.g., Becker, 1964; 1975; Blaug, 1976; Blau & Ferber, 1986; Hachen, 1990; Mincer, 1974) follows a sociological perspective which focuses on the influence of social factors (e.g., social class) on career outcomes (e.g., Blau & Duncan, 1967; Chinoy, 1955). However, variables which do not exactly follow from a sociological tradition, but relate to job performance and career outcomes (e.g., job- or occupation-relevant personality traits and mental ability), also have been considered as human capital variables (Melamed, 1996a). According to the human capital approach, organisational or societal rewards, such as hierarchical and income progression, are appointed according to relevant competencies which, *de facto*, contribute to the organisational performance or to the functioning of the society. Such competencies can be acquired through a number of means, such as education, work experience, job



tenure and tenure with the organisation (e.g., Becker, 1964; Mincer, 1974; Nicholson & West, 1988; Polachek, 1981). The human capital approach assumes rationality in the use of resources by the organisation, the society and the individual (e.g., Cullen & Novic, 1979; Davis & Moore, 1945; Herriot, Gibson, Pemberton, & Pinder, 1993; Melamed, 1996a; 1996b; Mincer & Ofek, 1982; Mincer & Polachek, 1974; 1978).

Education is probably the most utilised and representative variable for human capital (e.g., Schooler & Schoenbach, 1994; Smith, 1990). Individuals invest in their own education (e.g., acquisition of an MBA degree, learning a foreign language). Organisations or states invest in education by providing educational opportunities to their employees and citizens, respectively (e.g., sponsoring in-company or out-company courses, providing state scholarships or grants).

Melamed (1996b) offered a comprehensive classification of human capital attributes into three categories: attributes that should facilitate performance in the vast majority of jobs (e.g., educational attainment); “job-specific” attributes that relate to performance only in some jobs (e.g., job-specific personality traits); and, finally, attributes that should not be expected to relate to performance in any job, or “job-irrelevant attributes” (e.g., physical characteristics and appearance), which, nevertheless, can affect career outcomes.

There is some empirical support for the human capital approach and current practices in human resource management and organisational psychology seem to adhere to it (e.g., Agarwal, 1981; Gerlach, 1987; Jaskolka, Beyer & Trice, 1985; Cannings, 1988a; Melamed, 1995b; 1996a; Mincer, 1974; Shackett & Trapani, 1987; Sheridan, *et al.*, 1990; Schneer & Reitman, 1990; Tharenou & Conroy, 1994). For instance, Tharenou, *et al.* (1994) found education and attendance of training and development programmes to exert direct effects on the career advancement of Australian managers. Melamed (1996b) found job-relevant human capital (mental ability and education) to be predictive of salary level and managerial level in a sample drawn from the general British work force.

### 2.2.2 STRUCTURAL APPROACH

The structural or opportunistic approach represents a reaction to the human capital approach which, with its focus on the individual, tends to ignore organisational circumstances or structures (Baron & Bielby, 1980; Cannings, 1988a; Haberfeld, 1992). The structural approach suggests that career progression is influenced by so-called structural factors (e.g., Bennis & Cassell, 1984; Hachen, 1990; Sonnenfeld, 1989; Spilerman, 1977). Such factors can be of an organisational, environmental or societal nature. Organisational factors include organisation structure, size, span of responsibility, job discretion, criteria for allocation of organisational rewards, organisational career ladders and internal labour markets (Anderson, Milkovich & Chui, 1981; Aryee, Chay & Tan, 1994; Melamed, 1995a; 1996a; 1996b; Sonnenfeld, Peiperl & Kotter, 1988; Sonnenfeld, 1989; Vardi, 1980; Woodall, Edwards & Welchman, 1995). Gunz (1988; 1989) commented on the distinctive “career logic” of every organisation. Environmental factors or labour market forces (Melamed, 1995b) include the type of industry and market structure (e.g., service vs. manufacturing, degree of regulation, profit vs. non-profit making) and the economic circumstances (e.g., period of war, recession, etc.) (e.g., Gunz, 1988; Lewis, 1986; Long & Link, 1983; Melamed, 1995a; 1996b; Shackett & Trapani, 1987). Societal factors refer to the structure and changes in the society (e.g., the educational system which can influence the supply and the type of knowledge in the labour market) (e.g., Melamed, 1995a; 1996b; Reilly, 1994). Melamed (1995a; 1996b) has coined an additional structural factor, labelled “micro-job level” or “micro-occupational level”, which relates to organisational factors. In particular, it refers to peculiarities of the work organisation with respect to specific jobs (e.g., the importance of a certain job to the organisation, the amount of power attached to an organisational position, etc.).

There is also support for the structural perspective (e.g., Acs & Danziger, 1992; Baron, Davis-Blake & Bielby, 1986; Dalton & Ford, 1977; 1978; Hendricks, 1977; Herriot, *et al.*, 1993; Jaskolka, *et al.*, 1985; Long & Link, 1983; Melamed, 1993; 1995b; 1996a; Pfeffer & Cohen, 1984; Shackett & Trapani, 1987; Sheridan, *et al.*, 1990; Tharenou & Conroy, 1994). Bruderl, *et al.* (1993) found that the relationship between

individual human capital characteristics and promotion chances in a German engineering company was moderated by the opportunity structure in the organisation. Opportunity structure was a function of the number of workers in each hierarchical level and the number of promotions made from each level at a specific year. The number of promotions was affected by extraction or contraction of the company which, in turn, were affected by the conditions in the industry sector and the economy in general. Melamed (1996b), employing a sample from the general British work force, found that a number of structural factors were predictive of salary levels. These factors included (using Melamed's (1996b) classification): societal opportunities [e.g., geographic region, industry size and type (public vs. private)]; organisational opportunities [e.g., organisational sector (service vs. manufacturing)]; and occupational opportunities (e.g., class of occupation and type of the job). Similarly, structural factors, including societal opportunities (e.g., geographic region, industry size and type), organisational opportunities (organisational sector) and occupational opportunities (class of occupation), were predictive of managerial level.

### *2.2.3 CAREER STAGE APPROACH*

The career stage approach (e.g., Crites, 1981; Dalton, Thompson & Price, 1977; Dalton & Thompson, 1986; Hall, 1976; Super, 1957; 1980) suggests different stages in the career progression of the individual. The stages are determined by changing needs, competencies and values.

This approach has been heavily influenced by theory and research on individual life-span development (e.g., Erikson, 1963; 1968; Gould, 1972; 1978; Levinson, *et al.*, 1978; Levinson, 1986; Vaillant, 1977). Life stage theories suggest that different life (and career) stages are accompanied by different needs and concerns for the individual (Levinson, *et al.*, 1978; Gould, 1978; Hall, 1976; Schein, 1976). As it should be expected, career and life stage models are greatly overlapping. For example, Hall's (1976) model, which is representative of the career stage approach, takes into account adult life stage models.

Hall's (1976) model identifies four major career stages: exploration, establishment/advancement, maintenance and decline. During the exploration stage the individual is looking for a work role identity. This is a relatively unstable and not particularly productive period in the individual's career. During the establishment/advancement stage the individual starts settling down and advancing in one's work organisation or occupation. In this stage, the person is considerably more productive than in the previous stage. In the maintenance stage, the individual has already reached a quite high level in one's career; plateauing (stagnation in advancement) is what many times occurs in this stage. In the final stage, decline, the individual is prepared for exit from the workforce and mainly reflects on past experiences.

There is research which offers support to career stage models (Gattiker & Larwood, 1990; Nicholson & West, 1988; Rosenbaum, 1984; Stumpf, 1981). Melamed (1996a) found that, in general, career stage moderated the relationship between sets of human capital and structural variables and objective career success. The contribution of human capital and structural variables to objective career success increased with the career stage: i.e., the contribution was greater in later stages.

Consideration of career stages, with the needs and concerns that accompany them, can help in understanding the dynamics of relationships taking place in the work environment, such as mentoring and networking.

#### *2.2.4 SUMMARY OF APPROACHES IN THE STUDY OF CAREERS*

The above approaches encapsulate views across different disciplines, especially psychology, sociology, and management (Gattiker & Larwood, 1988). According to Rosenbaum (1989), they represent two major perspectives in the study of careers; the individualistic and the structural. There appears to be a debate between advocates of the former and the latter approaches.

Some authors have interpreted the career literature as implying that a career and its outcomes are exclusive attributes of the individual and they call for caution over this implication (e.g., Bruderl, *et al.*, 1993; Nicholson & West, 1989). According to these authors, failure to take into account factors outside the individual can lead to distorted

impressions regarding both the individual factors which influence career outcomes and their relative effects on these outcomes (Nicholson & West, 1989). Advocates of the structural perspective argue that it is the organisational, societal and economic context in which individuals find themselves, rather than individual factors (e.g., competencies, personality, socialisation, decisions), that account for most of the variance in organisational behaviour variables (e.g., Moore, 1990; Riger & Calligan, 1980; Roberts, *et al.*, 1978).

On the other hand, however, there is criticism of the suggestion that structural factors mainly affect individual careers (Arthur, 1994). It has been suggested that the process through which individual careers develop both shapes organisations and determines their fate (Feldman, 1985; Florida & Keney, 1990; Starr & Bygrave, 1991). The importance of the role of individual factors has been acknowledged even by authors who adopt structural perspectives (e.g., Ibarra, 1993). Furthermore, empirical work suggests that individual factors play an important role even in cases where they have been traditionally neglected (e.g., Fiorito & Dauffenbach, 1983). For instance, Colarelli, Dean and Konstans (1987) found personal variables (e.g., socio-economic status) to account for more variance than structural factors in the promotability of young accountants. Similar findings have been reported by Gattiker & Larwood (1990).

It seems that, as in most cases in the social sciences, the complete picture is obtained by considering both perspectives (Smith-Lovin & McPherson, 1993). This becomes evident when theoretical considerations and models that are proposed to explain career success are considered (e.g., Fagenson, 1990; Ragins & Sundstrom, 1989; Tharenou, 1990; Tharenou & Conroy, 1994; Tharenou, *et al.*, 1994). For instance, Tharenou, *et al.* (1994) provide an account of how organisational structure (a structural variable) can influence attendance of company-sponsored training programmes (an individual level variable) to, in turn, influence career success. Shackett and Trapani (1987) found that all types of variables including human capital (e.g., age, education, marital status, work experience) and structural (market structure, geographic area) made significant contributions to a simultaneous model for income in a large sample of US employees. Similarly, Bruderl, *et al.*'s (1993) results suggested that a combination of structural (e.g., organisation hierarchical structure) and human capital variables explained

more variance in promotion rates than the structural or human capital factors considered alone. Cannings (1988) found that sets of variables which included human capital (e.g., education, type of education), structural (e.g., department of work) and behavioural/interpersonal (e.g., use of networking for career advice) made significant independent contributions to the variance in the salary levels of middle managers in a single organisation. Finally, Melamed's (1996a; 1996b) models of objective career success included human capital, structural and individual-level (e.g., career decisions) variables. Each of them made significant contributions to the objective career success criteria in a sample drawn from the general British workforce.

Therefore, the two approaches, individualism and structuralism, should be considered as working in concert rather than independently or exclusively. In fact, adoption of a holistic approach in the study of careers and other outcomes in the organisational environment has been called for (Anderson, Milkovich & Tsui, 1981; Aryee, *et al.*, 1994; Campbell, Dunnette, Lawler & Weick, 1970; Schein, 1976; Vardi, 1980). Melamed's (1996a) validated model for objective career success suggested that human capital variables, structural factors, career decisions and career stage work in concert. Therefore, when relationships among factors of one type (i.e., individual or structural) are investigated controls for factors outside those factors on which the investigation focuses should be imposed.

Next, the tournament model of careers, which incorporates elements from all the models reviewed above, is presented and its limitations are considered.

### 2.3 AN INTEGRATIVE MODEL AND IMPLICATIONS FOR INFORMAL DETERMINANTS OF CAREERS

A model which has been considered as an integration of the individualistic and the structural approach (Sheridan, *et al.*, 1990) is the tournament model of career progression (e.g., Rosenbaum, 1976; 1979; 1984; 1986). The tournament or mobility approach to career progression conceptualises careers as sequences of competitions, each of which has implications for the individual's mobility chances in all subsequent stages or selections (e.g., Rosenbaum, 1979; Sheridan, *et al.*, 1990). An implication of the model is that early career outcomes are decisive for later or eventual career outcomes.

This model tends to focus on careers within a single organisation, that is it adopts an intra-organisational perspective.

There are two prominent accounts for the impact of early career outcomes on later career outcomes:

(i) Early career outcomes have effects on the individual's self-confidence, self-efficacy and aspirations (e.g., Bray, Campbell, & Grant, 1973; 1974; Howard & Bray, 1988). Berley and Hall (1966) compared the careers of managers who had been assigned a demanding first job with the careers of managers who had been assigned a less demanding first job. They found that the former group were better performers and were more successful in their advancement than the latter group. This finding can be explained in terms of enhanced aspirations, enthusiasm, job involvement and confidence.

(ii) Early career outcomes serve as signals to the upper organisational levels (Rosenbaum, 1979). Signalling theory advocates that individuals at high organisational levels have to rely on information such as employees' prior achievements and social attributes to make decisions about promotions (Arrow, 1973; Spence, 1973; 1974; Stiglitz, 1975). Such information serves as a "signal" to the senior managers concerning employees' potential (Spence, 1973). This explanation capitalises on the notion of visibility as a factor that influences organisational career mobility (Forbes, 1987; Kanter, 1977). Three categories of such signals have been identified (Forbes, 1987):

(a) In the absence of other more objective criteria, early career outcomes (e.g., early promotions, organisational level, job status) serve as signals of an individual's potential to decision makers (Rosenbaum, 1979; Sheridan, *et al.*, 1990). Mobility, regardless of direction (e.g., vertical or lateral), has been found to be associated with the amount of exposure and visibility to the upper level management (Veiga, 1983). Lack of mobility may be associated by organisational decision makers with the peak of one's career (Rosenbaum, 1984). In addition, mobility should enhance network building which relates to career success (Melamed, 1995a).

(b) The number of different jobs or positions is associated with breadth of knowledge which is a prerequisite for promotion (Forbers, 1987; Kanter, 1977; Melamed, 1995a; Sheridan, *et al.*, 1990). This explanation bears relevance to the human capital approach

which assumes that organisations make rational use of and invest in qualities that relate to job performance.

(c) According to a number of authors, organisational departments differ in power according to their ability to control or face the organisation's external business environment (Giroux, Mayper, & Daft, 1986; Salancik & Pfeffer, 1974; Hickson, Hinings, Lee, Schneck, & Pennings, 1971; Pfeffer, 1981). Employees in powerful departments may enjoy more visibility to senior organisational decision makers. Empirical research supports this suggestion (Cannings, 1988a; Forbes, 1987; Sheridan, *et al.*, 1990). This factor should be especially important in the private sector of the economy, where the "stakes" are high and the environment is unstable. It should, however, be relatively unimportant in the considerably more stable public sector.

The visibility/signalling explanation is supported by suggestions that promotion decisions are largely made on the basis of subjective information (e.g., personal contacts) (Campbell, *et al.*, 1970; March & Simon, 1958; Stumpf & London, 1981) and that decision makers often engage in a limited search for candidates to fill organisational posts (Forbes, 1987; Rosenbaum, 1979; 1984).

There is some general support for the tournament model (Forbes, 1987; Rosenbaum, 1979; 1984; Sheridan, *et al.*, 1990; Veiga, 1983). Bruderl, Diedmann and Preisendorfer (1991) found that the time it took for workers to achieve the first promotion was predictive of their overall promotion rates in their career in a specific organisation. On the other hand, however, there is criticism of the supportive studies on methodological grounds (Sheridan, *et al.*, 1990). It seems that there is no adequate control for environmental factors and no consistency in the operationalisation of variables across studies. For instance, Forbes' (1987) and Rosenbaum's (1979) studies were conducted in organisations embedded in different economic and business environments. In Rosenbaum's (1979) case, the business environment was considerably more stable. In a stable and predictable environment career patterns can be very structured and early success may have a permanent lasting effect on later career outcomes (Forbes, 1987). Therefore, the stability of the business environment may be a moderating factor for the applicability of the theory. This factor has not been controlled for. In addition, early success is neither an absolute prerequisite for mid-career success



nor a predictor for eventual success in the organisation (Forbes, 1987; Veiga, 1987). Williams and Van Sell (1985), on the basis of data gathered across organisations and occupations, concluded that the tournament model was not supported.

Regardless of the degree to which, or the conditions under which, the tournament approach to career success is supported by research, the model has an important shortcoming. It does not provide an account for variables which determine individual differences in early success or in success in each subsequent “tournament”. The tournament model, along with the human capital and structural approaches, seems to be suited to work (with various degrees of validity) at a “macro level” instead of a “micro level”. Rosenbaum (1979) described his tournament mobility model as providing a framework for relating macro and micro levels. However, his “micro level” term referred to employee perceptions of the processes prevailing on career progression within their organisation. These perceptions, and the subsequent attitudes and behaviours, would be formed and exhibited after a certain amount of time in employment had passed, usually at the end of the first “tournament”. To illustrate, a number of employees starting working in a certain organisation can be considered. The tournament model is not able to make any prediction concerning their middle or late career outcomes until the first or establishment stage of the career has been completed. This is usually after at least two to three years of employment in the organisation. Rosenbaum (1979, p. 225) himself stresses that he was aiming at a “descriptive analysis, not causal inference”, and at investigating “whether early career paths are related to later career mobility” and not “to assert that early career paths cause later career mobility”. He notes that the relationship may be affected by other factors (Rosenbaum, 1979). Veiga (1983) made a similar statement. Furthermore, Rosenbaum (1979) notes that tracking the determinants of later career success, or career success in general, in the organisation before the initial period of employment is a serious possibility.

## 2.4 CONCLUSIONS ON THEORIES OF CAREER PROGRESSION

The inability of the human capital and the structural models, separately or tied up together (e.g., in terms of the tournament model), to fully account for career success has been noted in the literature (Ferris & Judge, 1991; Ferris & King, 1991; Pfeffer, 1989).

Furthermore, it has long been suggested that the relationship between “objective” criteria for promotion (e.g., performance evaluations) and promotion decisions is mediated by factors which are irrelevant to the job (Campbell, *et al.*, 1970; Quinn, Taber & Gordon, 1968). Flippo (1966) referred to “informal bases for promotion” as factors irrelevant to the job which influence promotion decisions, hence, career progression and career outcomes. Melamed’s (1996b) “job-irrelevant’ attributes” refer to a similar issue. These suggestions are supported by the fact that there is very little knowledge about the way promotion decisions are made. Promotion decisions are not made by specialists, but by individuals at the higher levels of the organisation (Stumpf & London, 1981). As already noted, upper level decision makers often engage in a limited search for internal candidates to fill organisational posts often relying on “signals” (e.g., Forbes, 1987; Rosenbaum, 1984).

Feldman and Weitz (1991) introduced the term “careerist orientation” to refer to the pursuit of career advancement by means that do not relate to work performance, such as political behaviours. Luthans (1988) distinguished between success in management in terms of rapid advancement in the organisational hierarchy and managerial effectiveness in terms of ability to complete assignments and leadership abilities. He noted that building networks and politicking behaviour were associated with success in the former sense, but not with effectiveness in the latter sense. Apart from suggestions, there is empirical research which suggests very little or no relationship between career progression (e.g., salary progression, promotability, number of promotions, hierarchical level) and job performance (Cannings & Montmarquette, 1991; Colarelli, *et al.*, 1987; Cox & Harquail, 1991; Scandura, 1992). Cannings (1988) concluded that participation in informal organisational networks and having mentors may exert more influence on the decisions of superiors concerning career success factors than objectively determined performance. Furthermore, Jaskolka, *et al.* (1985) reported no relationship between

“objective” promotion criteria (seniority, performance, technical skills) and hierarchical level and financial rewards. Kanter (1977), studying decision making regarding promotions in a single organisation, noted that decisions concerning promotions were influenced by a patronage system rather than a merit-based procedure. Meyerson (1994) found that “social capital” (network ties with other individuals in the work context) accounted for additional variance in managers’ income above human capital (e.g., education, tenure) and structural factors (e.g., ownership structure of the company and company size). Finally, Olson and Becker (1983) noted that one of the two alternative explanations to an unexpected result they obtained in their study on promotion patterns was “the unlikely possibility that firms promote less-able individuals” (Olson & Becker, 1983, p. 636).

To summarise, theoretical frameworks for career progression, either considered in isolation, in combination or in hybrid forms (e.g., tournament model), do not fully account for individual differences in career outcomes. Authors and empirical findings stress that informal interpersonal processes play a major role in the allocation of organisational rewards (e.g., promotions) (e.g., Cannings, 1988; Coates & Pellegrin, 1957; Ferris & Judge, 1991; Herriot, *et al.*, 1993; Kanter, 1977; Pfeffer, 1977a; 1989; Whitely & Coetsier, 1993; Whitely, *et al.*, 1991). In fact, the tournament model strongly suggests that links with other individuals in the organisation can play an important role in career progression. Therefore, informal interpersonal processes must be taken into account for a more complete picture to emerge (Aryee, Wyatt & Stone, 1996; Boxman, De Graaf & Flap, 1991; Cannings, 1988; Ferris & King, 1991; Meyerson, 1994; Pfeffer, 1989; Tharenou, 1997; Whitely, *et al.*, 1991). Concluding her review on managerial career advancement, Tharenou (1997) noted that “promotion ... is determined by individuals’ abilities and accomplishments and organisation needs, including context, but also by networks and politics” (p. 83) and that “politics influences who advances in management...” (p. 83).. The existence, extensiveness and quality of interpersonal links in the organisational environment have been operationalised by means of the variables of mentoring and networking (e.g., Cannings & Montmarquette, 1991).

## CHAPTER 3: CAREER SUCCESS

## CHAPTER 3. CAREER SUCCESS

The notions of advancement and success are inherent to the concept of career, and “career success” is the concept which is mostly associated with the term “career” (Aryee, *et al.*, 1994; Gattiker & Larwood, 1986). Hall (1976) notes that although the traditional definitions of “career” do not make explicit reference to success or failure the notion of success is what “career” is mostly associated with. In more achievement-oriented individualistic societies (e.g., US, UK, Hong-Kong) where individual success is highly valued, career has served as a vehicle for such success (Aryee, *et al.*, 1996).

The study of career success has attracted attention because of scientific and practical interest. Identification of factors which contribute to career success can be of value to both individuals and organisations (Ellis & Heneman, 1990). However, despite this attention, Poole, Langan-Fox and Omodei (1993) point out that in the career literature there has been a rather inadequate conceptualisation of the term “career success”. The effort to unify perceptions of career success from an external or objective perspective and an internal or subjective perspective has led to the distinction between objective career success and subjective career success (e.g., Arthur, *et al.*, 1989; Van Maanen, 1977; Van Maanen & Schein, 1977).

### 3.1 OBJECTIVE CAREER SUCCESS

Objective career success refers to the evaluation of an individual’s career as perceived by others. Certain norms (e.g., societal standards) are used in this evaluation. This approach employs an external reference point, the path of an individual’s career as described by a reference point or group (Gattiker & Larwood, 1988; Jaskola, *et al.*, 1985; Van Maanen & Schein, 1977).

The term “career achievement” has also been used to refer to notions similar to those that objective career success refers to. Career achievement, however, refers more to the individual’s movement through the organisational hierarchy (Driver, 1979; 1985). Hence, it is considered a subset of career success (Gattiker & Larwood, 1990).

Criteria for objective career success include income and organisational level (e.g., Dreher, Dougherty & Whitely, 1985; Gould & Penley, 1984; Jaskolka, *et al.*, 1985; Kotter, 1982; Melamed, 1994b; 1995b; 1996b; Pfeffer, 1977; Pfeffer & Ross, 1982), number of levels below the top level of one's work organisation (Gattiker & Larwood, 1990), occupational prestige scores or job status/title (e.g., Pfeffer, 1977; Useem & Karabel, 1986), frequency or number of promotions (e.g., Bozionelos 1991; Melamed & Bozionelos, 1992a; 1992b; O'Reilly & Chatman, 1994; Tharenou & Conroy, 1994), length of time the individual has spent in the last position or plateauing (e.g., Gattiker & Larwood, 1988; Gould & Penley, 1984; Pfeffer, 1977; Rosenbaum, 1979; 1984) or even success in job applications (O'Reilly & Chatman, 1994).

Definitions and operationalisations of objective career success sometimes draw upon the perspective from which the career is considered. For instance, adopting a career stage approach, career success has been defined as the amount of time one has spent in one's last position (plateauing) (e.g., Ference, Stoner, & Warren, 1977; Rosenbaum, 1984; 1985). This is considered an indication of whether the individual's career has reached a plateau stage above which little or no progression should be expected (Gould & Penley, 1984; Kotter, 1982; Hall, 1976; Rosenbaum, 1985; Veiga, 1981). Furthermore, the typology of variables which refer to career success and predictors of career success may vary across disciplines (Melamed, 1996a). For instance, variables such as occupational prestige and professional level have been viewed as indices of career success from the sociological point of view, but they have been viewed as antecedents of career success in the psychologically-oriented literature (Melamed, 1996a).

The diversity of measures of objective career success has led to some discrepancies, even within studies, when results on the relationships between different operationalisations (e.g., status, salary, promotions, types of promotions) and various predictor variables are reported (e.g., Aryee, *et al.*, 1996; Cox & Harquail, 1991; Herriot, *et al.*, 1993; Melamed, 1996a). For instance, Aryee, *et al.* (1996) found career-oriented mentoring to predict number of promotions, but not salary levels. The existence of discrepancies of this kind has led to the suggestion that no universal agreement on what constitutes "objective career success" exists (Korman, 1980). Nevertheless, most of the measures which have been used in research are compatible when they are considered

within a certain context (e.g., a particular organisation or occupation). The implicit assumption made in some pieces of research, however, that indices of career mobility can be used as indices of objective career success warrants some more attention.

### *Career Mobility as opposed to Objective Career Success*

There is some inconsistency in the literature regarding the use, interpretation and operationalisation of the terms “career mobility” and “objective career success”. Career mobility is defined as “any sequence of jobs” (Rosenbaum, 1979; Spilerman, 1977; Thompson, Avery & Carlson, 1968) and is distinguished from strictly orderly sequences of jobs (Rosenbaum, 1979). Not all authors do seem, however, to adhere to this definition and distinction. Career mobility has been operationalised in various ways including: level in the organisational hierarchy (Aryee, *et al.*, 1994; Rosenbaum, 1979; Scandura, 1992; Warner & Abegglen, 1955); number of organisational levels upwards that the individual has moved (Gould, 1979; Scandura, 1992); number of moves (inter- or intra-organisational) in an individual’s career (Nicholson & West, 1988; Veiga, 1983). Furthermore, career mobility has been used to indicate career success and the two terms, career mobility and career success, have been treated as identical (Scandura, 1992). This can lead to problems in the interpretation of the results of relevant research. To illustrate, Rosenbaum (1979), in his operationalisation of career mobility, used only vertical moves. On the other hand, Veiga (1983) operationalised career mobility by using all moves that the individual had made in one’s career, regardless of whether those moves were vertical or lateral, in the same organisation or to different organisations. Yet, in the work of both, Rosenbaum’s (1979) and Veiga’s (1983), career mobility was used as an index of objective career success. However, there is an important qualitative difference between the two operationalisations. Therefore, different operationalisations of “mobility” may refer to different definitions of objective career success. The negative consequence of this discrepancy, or those of a similar nature, is that the results of the relevant studies do not refer to the same concepts, despite both claiming to investigate objective career success.

The inherent problem in this is that generalisations across studies which use career mobility as an index of objective career success should not be made unless the same, or qualitatively similar, mobility indices have been used. There are authors who

indicate awareness of this issue (Cox & Harquail, 1991; Gattiker & Larwood, 1986; 1988). They make a distinction between vertical and lateral moves (Gattiker & Larwood, 1986), or job mobility and upwards mobility (Cox & Harquail, 1991); and they consider only the latter as indices of objective career success. In fact, Veiga (1983) himself seems to have acknowledged the lack of correspondence between mobility per se, regardless of direction, and career success. He noted that among the “mobile” managers of his study only a few achieved significantly higher salaries (another objective definition of career success) and only in the cases that they had moved to an executive level position (that is vertical movement).

It is, therefore, wise to consider career mobility and objective career success as coinciding only in cases (i.e., studies) where mobility refers to vertical moves (e.g., number of organisational levels the individual has risen). Net number of moves, regardless of direction, or lateral moves should not be considered as indices of objective career success, although they may affect one's prospects for vertical advancement or career attainment (e.g., Cox & Harquail, 1991; Herriot, *et al.*, 1993; Melamed, 1996b).

### 3.2 SUBJECTIVE CAREER SUCCESS

Subjective career success refers to individuals' own “internalised” perceptions of their careers (Poole, *et al.*, 1993). It refers to individuals' views and feelings regarding their up-to-date career accomplishments and prospects for future accomplishments (Gattiker & Larwood, 1986; 1988). Not all individuals see their work and work careers in the same light or under the same perspective, career success having different meaning and career objectives being considerably different across individuals. Derr (1986) classified individuals into five categories according to their primary career orientations: getting ahead individuals, who are mainly concerned with advancement in the organisational hierarchy and achieving status; getting secure, whose main concern is recognition, respect and security within the organisation they work; getting free, whose main concern is to have control and autonomy over their work processes; getting high, who mainly seek challenges and opportunities for “adventure”; and getting balanced, who see their personal life and relationships with others as at least equally important as



their work and work careers. Only the first type of individuals had the advancement in the organisational hierarchy as their primary objective. In fact, the last type of individuals tended to see work and career as a means of supporting their out-of-work, most important for them, activities.

Subjective career success has been considered a multidimensional construct (e.g., Aryee, *et al.*, 1994; Cox & Harquail, 1991; Gattiker & Larwood, 1986; Hall, 1976). It can be concisely conceptualised, however, as a combination of two factors: first, the individual's internalised evaluations of the self by significant others (e.g., family) and evaluations of the self in comparison to colleagues or to their job; and second, the individual's progress in one's career with respect to age and career expectations (Betz & Fitzgerald, 1987; Gattiker, 1985; Gattiker & Larwood, 1988). An important point is that subjective career success does not only refer to perceptions about career in the context of work (e.g., satisfaction with job competence, organisational level, progress, income). It also refers to perceptions about personal life (e.g., family) and relationships with others (e.g., colleagues, supervisors) in the work place (Aryee, *et al.*, 1994; Derr, 1986; Gattiker, 1985; Gattiker & Larwood, 1986; 1988; Schein, 1976). Gattiker and Larwood (1986), the most influential authors in the subjective career success literature, concluded that subjective career success is composed of five factors: job success, interpersonal success, life success, financial success, and hierarchical success.

There is no clarity in the literature regarding the use of the terms "subjective career success" and "career satisfaction" (see, for instance, Aryee, *et al.* (1994) or Gattiker & Larwood (1988)). Aryee and Chay (1994) consider career satisfaction as synonymous to subjective career success. Considering operationalisations of objective career success and career satisfaction, however, it seems that career satisfaction should be treated as a facet of subjective career success (e.g., Aryee, *et al.*, 1994; Gattiker, 1985; Gattiker & Larwood, 1986; 1988; Greenhaus, *et al.*, 1990; Mortimer, 1979).

Subjective career success has been assessed by scales which involve the measurement of relevant attitudes, including alienation (e.g., Korman, 1980), career satisfaction (Greenhaus, Parasuraman & Wormley, 1990), or, more specifically, subjective career success (e.g., Gattiker & Larwood, 1986).

### 3.3 THE RELATIONSHIP BETWEEN OBJECTIVE AND SUBJECTIVE CAREER SUCCESS

A disproportional body of the literature has focused on objective career success (e.g., Gould & Penley, 1984; Kotter, 1982; Melamed, 1994b; 1995b; Pfeffer, 1977; O'Reilly & Chatman, 1994; Rosenbaum, 1979; Veiga, 1983; 1987; Tharenou & Conroy, 1994). The notion that there is importance and urgency in also studying subjective career success, however, has gained ground (Aryee, *et al.*, 1994; Bailyn, 1989; Collin & Young, 1986; Gattiker, 1984; 1985; Gattiker & Larwood, 1986; 1988; 1990; Peluchette, 1993; Poole, *et al.*, 1993; Schein, 1980; Stewart, 1990).

The relative lack of focus on subjective career success is related to the fact that early views considered that objective and subjective career success exist in parallel (e.g., Gattiker & Larwood, 1986; Korman, Mahler & Omran, 1983). The rationale behind this notion is the common assumption that the higher the objectively measured career success of the individual the higher one's satisfaction with aspects of one's career and personal life. High organisational positions or prestigious occupations are assumed to offer more independence, challenge and autonomy. They are usually accompanied by societal prestige and respect. Therefore, seemingly successful individuals are assumed, or have been assumed, to have positive feelings about their careers and their achievements in life (Gattiker & Larwood, 1988).

In the past two decades, however, authors have suggested that objective and subjective career success should not be considered as parallel (Gattiker & Larwood, 1986; Hall, 1976; Phillips-Jones, 1982; Van Maanen, 1977; Van Maanen & Schein, 1977). First, there is research which suggests that individuals' perceptions of their own careers often fail to correspond to more objective facts (e.g., Herriot, *et al.*, 1993; Lawrence, 1984; 1987; Nicholson, *et al.*, 1985). Herriot, *et al.*, (1993) found that individuals who were older and at higher organisational levels tended to believe that they were behind their career timetables. Second, at a more specific level, a number of studies employing a variety of occupational groups, ranging from individuals with managerial responsibilities and lawyers to technicians, suggested that there is not always correspondence between objective on-the-job accomplishments and feelings about these accomplishments (e.g., Korman, 1980; Korman, Wittig-Berman & Lang, 1981; Platt &

Pollock, 1974; Van Maanen & Schein, 1977). For instance, Korman and his colleagues gathered data which suggested that perceptions of personal career success were low among managers who were rated as “successful” on the basis of objective criteria such as status and salary (Korman, 1980; Korman, *et al.*, 1981). To complement these points, some authors noted that the meaning of career is changing along with changes in the economy and society (Derr, 1986; Yankelovich & Immerwahr, 1983). Hence, considering careers from an outsider’s “objective” perspective ignores the “meaning” that individuals attach to them, a meaning that is not static and is constantly changing according to socio-economic changes.

Gattiker and Larwood (1989) suggested that the two perspectives on career success, objective and subjective, are not mutually exclusive, a suggestion that makes intuitive sense. Research indicates that subjective career success is determined by both subjective (e.g., interests, family considerations) and objective (e.g., income, status, promotions) criteria (Gattiker & Larwood, 1988; Poole, *et al.*, 1993). Furthermore, research on the relationship between objective and subjective career success does indicate a positive relationship (Aryee, *et al.*, 1996; Peluchette, 1993; Reitman, 1985; Schmeer & Reitman, 1990; 1994; Strober, 1982). Yet, the strength of the relationship is such as not to allow for substitution of the one variable with the other. In fact, Whitely & Coetsier (1993) reported no relationship, but career satisfaction was measured with a single item and the sample consisted of MBAs in their early career stages, which probably contributed to the result.

Therefore indices of both objective and subjective career success should be used when career success is investigated (e.g., Gattiker & Larwood, 1988; 1990; Peluchette, 1993). Use of both objective and subjective career success indices will offer a more complete picture.

There should be no confusion over the fact that there is a need to investigate both objective and subjective career success because they are distinct and the fact that, according to research, objective and subjective career success are inter-related. This is exactly what makes the investigation of their relationship and the pattern of their association with other variables most interesting and important. Such an investigation can provide valuable suggestions concerning human resource management policies, at a time

when the restructuring, or other related changes (e.g., introduction Information Technology elements in the work content), of most organisations causes traditional career patterns to change (e.g., Derr, 1986; Herriot, *et al.*, 1993; Herriot, Gibbons, Pemberton & Jackson, 1994; Inkson & Koe, 1993; Woodall, *et al.*, 1995).

### 3.4 THE RELATIONSHIP OF CAREER SUCCESS WITH HUMAN CAPITAL AND STRUCTURAL FACTORS

There is research which reports on the relationship between human capital and structural variables with indices of career success. A review of the mostly investigated factors of this kind follows.

#### 3.4.1 STRUCTURAL CHARACTERISTICS AND CAREER SUCCESS

Structural characteristics that have been found to relate to objective career success include organisational size and structure (Brown & Medoff, 1989; Bruderl, *et al.*, 1993; Herriot, *et al.*, 1993; Idson & Feaster, 1990; Pierce, 1990; Schneer & Reitman, 1995; Spurr, 1990; Whitely & Coetsier, 1993; Woodall, *et al.*, 1995); organisational conditions and management practices and policies (e.g., investment in technology); type and state of industry (Baron, *et al.*, 1986; Bruderl, *et al.*, 1993; Dunne & Schmitz, 1992; Gunz, 1988; Hamermesh, 1980; Mainiero, 1986; Melamed 1995b; 1996a; Olson & Frieze, 1987; Olson, Frieze & Good, 1987; Pierce, 1990; Reilly, 1994; Rosenbaum, 1985; Tharenou & Conroy, 1994; Whitely & Coetsier, 1993); or the strategy of the organisation (Slocum, *et al.*, 1985).

It has been suggested that structural characteristics should relate to subjective career success (Gattiker & Larwood, 1990; Herriot, *et al.*, 1993). Empirical research on this issue, however, is limited. Aryee, *et al.* (1994) found internal labour market structure and job discretion to be associated with subjective career success. Furthermore, a negative relationship between organisational size and career satisfaction has been reported (Schneer & Reitman, 1995; Whitely & Coetsier, 1993).

### 3.4.2 HUMAN CAPITAL AND CAREER SUCCESS

#### *Age*

Age has been reported to relate to indices of objective career success (Aryee, *et al.*, 1996; Cannings, 1988; 1988a; Gattiker & Larwood, 1988; Corzine, Buntzman & Busch, 1994; Jaskola, *et al.*, 1985; Herriot, *et al.*, 1993; Melamed, 1995b; 1996b). Cannings and Montmarquette (1991) found that age was negatively associated with bidings for promotion. Age has also been reported to relate to subjective career success (Aryee, *et al.*, 1994; Cox & Harquail, 1991; Gattiker & Larwood, 1988; Herriot, *et al.*, 1993)).

#### *Education*

Educational attainment relates to objective career success in a positive direction (e.g., Corzine, *et al.*, 1994; Gattiker & Larwood, 1988; Gould & Penley, 1984; Herriot, *et al.*, 1993; Howard, 1986; Melamed, 1995b; 1996a; 1996b; McClelland & Franz, 1992; Schooler & Schoenbach, 1994; Tharenou & Conroy, 1994; Tharenou, *et al.*, 1994; Useem & Karabel, 1986).

The relationship between educational attainment and subjective career success, however, appears to be negative (Gattiker & Larwood, 1988; 1990; Romney, Smith, Freeman, Kagan & Klein, 1979). The suggestion is that individuals with less education feel better about their career accomplishments than their better educated counterparts, probably because less educated individuals may feel that they have beaten “the odds” (Gattiker & Larwood, 1988; Lang, 1985). Finally, Aryee, *et al.* (1994) found no relationship between education and subjective career success. However, in Aryee, *et al.*’s (1994) study the variability in education level was very low because all individuals employed in the study had at least undergraduate degrees.

#### *Class of Social Origin*

Using Melamed’s (1996b) classification, socio-economic origin is a job-irrelevant human capital variable. Socio-economic origin has been found to relate to objective

career success (Dreher, *et al.*, 1985; Frieze, Olson & Good, 1990; Pfeffer, 1977; Useem & Karabel, 1986). Explanations for the relationship include parent role modelling and inculcation of values, aspirations and behaviours which are valued by the society and are instrumental in the achievement of educational and occupational outcomes (Colarelli, *et al.*, 1987; Marjoribanks, 1988).

The relationship between social origin and subjective career success has not been well researched and the results of existing research are equivocal. Whitely and Coetsier (1993) found that socio-economic origin was related to career satisfaction. On the other hand, Schneer and Reitman (1994) found no relationship between career satisfaction and father's education, which has been used as a criterion for the estimation of socio-economic origin (Marjoribanks, 1988). Other empirical work suggests the existence of only a weak relationship (Gould & Penley, 1984; Korman, 1980).

### *Marital Status*

According to Melamed's (1996b) classification, marital status is also a job-irrelevant human capital variable. Research reports do suggest that there is a relationship between simple marital status and objective career success (Aryee, *et al.*, 1996; Pfeffer & Ross, 1982; Gattiker & Larwood, 1988); and between marital status and subjective career success (Gattiker & Larwood, 1988; 1990; Schneer & Reitman, 1990). These reports, however, are equivocal with respect to the direction of the relationship. Family demands may lead to conflict between work/career and non-work roles (e.g., Evans & Bartolome, 1980; Frone & Rice, 1987; Pond & Green, 1983), or they may lead to certain decisions (e.g., not to take a new job or a promotion and relocate) which may inhibit objective career success. On the other hand, family obligations may motivate the achievement of targets which relate to objective career success (e.g., an increase in income) (e.g., Pfeffer & Ross, 1982). Furthermore, the relationship may fluctuate according to changes in the configuration of the family (e.g., dual-earning vs. single-earning couples, children at home vs. no children at home, male dominant - female dominant - equal, nuclear or extended family) (e.g., Gattiker & Larwood, 1990; Pfeffer & Ross, 1982; Tenbrunsel, *et al.*, 1995). Finally, factors such as the moderating effects of career stage and the

mediating effects of satisfaction with family life have been invoked to explain these equivocal results (Frone & Rice, 1987; Gattiker & Larwood, 1988).

### *Organisational Tenure*

Tenure has been used as a surrogate variable for organisation-specific human capital (Cannings & Montmarquette, 1991; Reilly, 1994). Tenure with the organisation has been reported to relate to objective career success within the organisation (Aryee, *et al.*, 1996; Cox & Harquail, 1991; Gattiker & Larwood, 1988; Gerhart, 1990; Herriot, *et al.*, 1993; Melamed, 1995b; 1996b; Stewart & Gudykunst, 1982; Nkomo & Cox, 1990). Furthermore, organisational tenure has been reported to relate to subjective career success (Cox & Harquail, 1991; Herriot, *et al.*, 1993; Korman, *et al.*, 1983). The relationship of tenure with objective and subjective career success may be in opposite directions. Individuals who have longer tenure are more likely to have attained higher objective career success (e.g., promotions, hierarchical level), but they are also more likely to report lower scores on subjective career success (e.g., Cox & Harquail, 1991). This can be explained in terms of older individuals being more likely to have reached a plateau level, where very few promotions or no promotions are possible; hence, they feel less successful than individuals with less career advancement or at lower levels, but less tenure too (Gattiker & Larwood, 1990). The nature of the relationship between tenure and objective career success may depend on the measure of objective career success. To illustrate, if net number of promotions, or organisational level, or salary are used as indices of objective career success, the relationship with tenure will most probably be positive. However, if plateauing is used as the criterion of objective career success, the relationship with tenure should be expected to be negative. Therefore, when objective career success is employed as a variable, control for tenure with the organisation must be imposed (e.g., Bozionelos, 1991; Melamed & Bozionelos, 1992a; 1992b; Cox & Harquail, 1991; Pfeffer, 1977).

### *Starting Organisational Level*

Starting level in the organisation relates to objective career success within the organisation (Cox & Harquail, 1991; Tucker, 1985). Starting level in the organisation

reflects human capital in terms of prior experience and achievements. As in the case of tenure, the direction of the relationship should be expected to vary according to the criterion for objective career success. To illustrate, if hierarchical grade is used as criterion, starting grade should be expected to relate to objective career success in the positive direction. However, if the number of promotions is used as a criterion, a negative relationship between starting grade and objective career success is more likely. The higher the organisational level, the fewer the opportunities for advancement.

Regarding the relationship between starting organisational level and subjective career success empirical work is very scarce. Cox and Harquail (1991) reported no significant contribution of starting organisational level to career satisfaction, but they measured career satisfaction with a narrow two-item scale, which may have contributed to their result.

#### *3.4.3 THE RELATIONSHIP BETWEEN CAREER CHOICES AND CAREER SUCCESS*

It is reasonable to consider that career choices relate to career success. Career choices at a macro-level (e.g., subject choice within schools, choice of occupation, choice of work organisation, changes of work organisations) have been shown to relate to career outcomes (e.g., Melamed, 1995a; 1996a; 1996b). Melamed (1996a) operationalised career choices as a set of five variables: number of changes of employer, number of changes of jobs, organisational tenure, job type and prestige of occupation. He found that they mediated the relationship between a set of human capital variables and two indices of objective career success (salary and managerial level) in a sample drawn from the general British work force.

At a micro-level, however, (e.g., when certain choices after major career decisions have been made are considered (Melamed, 1995a)) the situation is different. Theoretical considerations and empirical results suggest that micro-level career choice variables, as considered in retrospect, are not a valid predictor of career success, at least for periods of time with practical use (e.g., more than one year) (Gattiker & Larwood, 1988; 1990; Landy, 1989; O'Reilly & Caldwell, 1981; Simon, 1979). An exception is provided by Gattiker and Larwood (1990) who found a significant relationship between career choices at a "micro-level" and objective career success.



This does not mean that micro-level career choices do not have effects on career success; they do (Larwood & Gattiker, 1986; Mainiero, 1986). However, a major problem with research on the relationship between career choices at a micro-level and career success, or indeed any career-related construct, is that it has to be based on retrospective self-report measures. Post-decisional justification, or selective memory play a major role in reports of this kind (Feldman, 1989; Gattiker & Larwood, 1988; 1990; Hogarth, 1980, Pfeffer & Lawler, 1980). This imposes serious validity problems in research investigations. Career-related choices at a macro-level (e.g., choice of higher education subject or choice of occupation) are easier to measure validly. Therefore, consideration of micro-level career choice variables is not suggested.

The variable that has been most considered and studied in the literature on career success is the job-irrelevant human capital variable of gender. This literature is reviewed in the following sections.

#### *3.4.4 GENDER AND OBJECTIVE CAREER SUCCESS*

Research on gender differences in career success suggests that men achieve more than women in terms of objective career success (e.g., Cannings, 1988a; Cannings & Montmarquette, 1991; Corzine, *et al.*, 1994; Cox & Harquail, 1991; DiPrete & Soule, 1988; Dreher, *et al.*, 1985; Gattiker & Larwood, 1988; Gerlach, 1987; Herriot, *et al.*, 1993; Larwood & Gattiker, 1986; Melamed, 1994b; Olson & Becker, 1983; Schneer & Reitman, 1994; 1995; Spurr, 1990; Whitely & Coetsier, 1993; Tharenou, *et al.*, 1994). Furthermore, women's and men's career patterns seem to be different (Gutek & Larwood, 1987; Larwood & Gattiker, 1987; Markham, South, Bonjean & Corder, 1985; Stamp, 1986; Tucker, 1985).

Therefore, the limited number of studies which report no gender differences in objective career success (Aryee, *et al.*, 1996; Gerhart, 1990; Gerhart & Milkovich, 1989; Reitman, 1985; Strober, 1982; Wallace, 1989) need some consideration. These studies appear to be biased for the following reasons. First, most of these studies were limited to early objective career success of MBA graduates (Reitman, 1985; Strober, 1982; Wallace, 1989). An MBA degree (or any professional degree) seems to be a "leveller" for

any prior differences in career experiences (Schneer & Reitman, 1995); it is a qualification that directs to a type of career (management) that is different from the career prior to its achievement (usually technical or subordinate). Although education, especially an MBA degree, has helped women's advancement to low and middle organisational levels, it does not seem to have been helpful regarding women's advancement to higher organisational levels (Adler, 1993). Second, these studies were conducted in the US and they employed individuals whose early career patterns may have been influenced by legislation against gender discrimination and affirmative action for equal opportunities in employment conditions. This legislation seems to have mainly affected hiring practices and not promotion processes, hence only early careers (Devanna, 1984; Frieze, *et al.*, 1990; Gordon & Strober, 1978; Lublin, 1991; Schneer & Reitman, 1994; Spurr, 1990). It should be expected that in other parts of the world, including Continental Europe, the situation may be more biased against women, even at their early career stages. Although legislation exists, it is less assertive and it does not include mandates for affirmative action (Adler, 1993)

Scrutiny of studies that reported no gender differences in objective career success supports the above considerations. One of these studies was conducted by Reitman (1985). Schneer and Reitman (1994) conducted their study with individuals who were employed in Reitman's (1985) study, six years later. The difference in objective career success (income) had become significant (Schneer & Reitman, 1994). Furthermore, in a similar, but more ambitious, longitudinal study, Schneer & Reitman (1995) compared career success indices (income, management level, career satisfaction) of men and women in their early-middle (7-12 years) and middle (13-18 years) post-MBA careers. They found that the, already existing, gender gap in objective career success in the early-middle post-MBA career increased with career progression to the middle stage. Gerhart (1990), who studied gender differences in starting and current salaries of employees in a large organisation, did not provide any information regarding the demographics of his sample and he excluded from his analysis a number of employees from the higher levels of the organisation. Finally, Lewis' (1986) study with employees in the US civil service is worth mentioning because of its large scale and the time period it encompassed. Lewis (1986) estimated promotion chances for about 22,000

men and women separately for each of nine consecutive years (1973-82). He concluded that “men and women ... have very similar promotion chances” (p. 416) and that “a variety of indicators demonstrated as much evidence of a female as of a male advantage in promotions” (Lewis, 1986, p. 417). It can be argued, however, that Lewis’ study was inconclusive mainly because of the ways the data were analysed. He broke his data in a large number of sets (e.g., promotions per year, per five years, overall) and he analysed these sets separately. Nevertheless, when he went on to distinguish between promotion chances per year and promotion rates in the overall career within the organisation, his data did show that men had higher promotion rates in the first five years of employment.

An additional point that merits some consideration is that it is likely that the discovery of gender differences in objective career success depends on the multiplicity of measures of career success which are used. Use of multiple instead of single indices (e.g., number of promotions and financial rewards as opposed to only salary levels) increases the likelihood for gender differences to be found, albeit not in all of the indices (e.g., Olson & Becker, 1983; Whitely & Coetsier, 1993).

The fact that a recent study (Aryee, *et al.*, 1996) did not report gender to contribute to two indices of objective career success of graduates in their mid-career stages should, however, be kept in mind. On the other hand, Aryee, *et al.*’s study (1996) was not designed to investigate gender differences in career success. Melamed’s (1995b) study, which was intended to investigate this issue, identified clear and substantial gender differences in two indices of objective career success, salary and managerial level.

#### *Accounting for the Gender Differences in Objective Career Success*

A number of explanations have been proposed for the gender differences in objective career success (e.g., Melamed 1994a; 1995b). These explanations revolve around two factors which are not mutually exclusive.

The first factor refers to different expectations and priorities of men and women. Evidence suggests that women are usually expected to and usually do prioritise family or the husband’s career over their own work and career (e.g., taking career and education breaks to look after their children, rejecting promotions or work re-allocations, working less overtime, taking the burden of domestic labour, changing their jobs for the sake of

their husband's job re-allocation) (e.g., Herriot, *et al.*, 1993; Kanter, 1977; Melamed, 1995b; 1996a; Lewis, 1986; Mincer & Ofek, 1982; Mincer & Polachek, 1974; 1978; Nicholson & West, 1988; Olson & Frieze, 1987; Rothwell, 1986; Schneer & Reitman, 1993; Strober, 1982; Taylor, 1986). On the other hand, men traditionally do, or have been expected to do, the opposite (Nieva, 1985; Russo, 1985; Shepard, 1985). This differentiation of role expectations appears to be universal, probably with the exception of the Scandinavian countries (e.g., Adler, 1993). For this reason, Melamed (1995a), on the basis of sociological theory (e.g., Barley, 1989), coined the notion of viewing men's and women's careers as greatly affected by different social roles, which are defined by societal norms.

Expectations and stereotyping regarding men's and women's careers and work roles, such as commitment and suitability for organisational life, are not limited to the focal individuals themselves, but they may extend to other participants in organisational life, such as senior managers (Adler, 1993; 1984; Fagenson, 1990; Melamed, 1995a; 1995b; Schneer & Reitman, 1995). Melamed (1995a; 1995b) suggested that senior individuals in organisations tend to underestimate women's ability and motivation. Empirical findings suggest that women's successful performance is more likely than that of men's to be attributed to contingencies rather than abilities (e.g., Greenhaus & Parasuraman, 1993).

Empirical findings support the suggestions presented in the previous paragraphs. Factors such as career interruptions and marital status relate differently to the objective career success of men and women (e.g., Gutek, 1988; Ragins & Sundstrom, 1989; Schneer & Reitman, 1990; Tharenou, *et al.*, 1994). In general, being married is positively associated with men's objective career success and negatively associated with women's objective career success (Hill, 1979; Korenman & Neumark, 1991; Melamed, 1995a; Shackett & Trapani, 1987). Tharenou, *et al.* (1994) found family situation, a variable composed of marital status and number of dependants, to exert differential effects on men's and women's managers work experience. Being married and having children increased years of work experience for men, but decreased years of work experience for women. Tenbrunsel, *et al.* (1995) conducted their study with dual-employed, male-dominant couples with children. They found that the negative effects of family

involvement on work involvement could be compensated for by the positive effects of the latter on the former for men, but not for women. Melamed (1995a) found the variables of being married and number of children to moderate the relationship between gender and objective career success. Single women without children had an advantage over other women in terms of objective career success, whilst no relationship emerged for men.

It has been suggested that with changes in society and with the current trend in increase in “post-traditional families”, where both spouses are breadwinners, the disadvantages of married women will be eliminated (Schneer & Reitman, 1993). There is some research which supports this suggestion (Melamed, 1996b; Pfeffer & Ross, 1982; Schneer & Reitman, 1993; Tharenou & Conroy, 1994). For instance, Schneer and Reitman (1993) in a recent study did not find married women with children and a working husband to earn less than women in any other family structure (i.e., single women, married women without children, or married women with children who were the breadwinners in the family). Empirical evidence, however, suggests that even in two-earner families women still undertake more of the household and parental burden (Karsten, 1994); and Tharenou (1997), in her brief review, concluded that household duties disadvantage managerial advancement regardless of gender. Furthermore, women managers are more likely than men managers not to be married, to have fewer children or to have no children (Davidson & Cooper, 1987; Gutek, 1988; Roney & Cahoon, 1990; Tharenou & Conroy, 1994; Tharenou, *et al.*, 1994).

The second factor refers to different career or career-related paths for men and women. Women tend to follow different educational paths and accumulate less or different types of work-related human capital such as education or training (e.g., Becker, 1985; Corcoran & Duncan, 1979; Daymont & Andrisiani, 1984; Gerhart, 1990; Mincer & Polachek, 1974; 1978; Madden, 1987; Tharenou & Conroy, 1994). Furthermore, it is suggested that women tend to be streamed into types of jobs, career ladders, or types of industry where there is less responsibility and fewer opportunities for advancement (e.g., Baron, Davis-Blake & Bielby, 1986; Centron, Lucken, McFadden & Weir, 1987; Epstein, 1970; Kanter, 1977; Larwood, Gutek & Gattiker, 1984; Martin, Harrison & DiNitto, 1983; Melamed, 1995b; 1996b; Nicholson & West, 1988; Stamp, 1986;

Stromberg & Harkess, 1978; Tharenou & Conroy, 1994; Tharenou, *et al.*, 1994). According to this line of argument, reception of less quantities of functions like training and development is not a conscious choice of women. For instance, Tharenou and Conroy (1994) found that women managers felt that were prevented more than men to attend training courses (e.g., by company policies, superiors).

Importantly, gender differences in measures of objective career success persist even when control for factors like the ones presented above is imposed. Such factors include human capital, dispositional, social and structural variables (e.g., Concoran & Duncan, 1979; Cox & Harquail, 1991; Gerlach, 1987; Haberfeld, 1992; Melamed, 1995b; Olson & Freeze, 1987; Olson, *et al.*, 1987; Schneer & Reiman, 1990; 1994; 1995; Stewart & Gudykunst, 1982; Stroh, Brett & Reilly, 1992; Tucker, 1985). For instance, Cox & Harquail (1991) found that a combination of human capital variables, structural variables, career paths (including career interruption), and performance ratings could not account for all the variance in the gender difference in objective career success. The results which are yielded from these studies have led to explanations that capitalise upon informal factors in the allocation of organisational rewards, such as interpersonal relationships (networking and mentoring) (Adler, 1993; Cox & Harquail, 1991; Duncan & Hoffman, 1979; Fagenson, 1990; Haberfeld, 1992; Larwood & Gattiker, 1985; Melamed, 1995b; Morrison, White & Van Velsor, 1987; Olson & Becker, 1983; Spurr, 1990). Olson and Becker (1983) concluded that the results of their study suggested that promotion standards for women were higher than those for men. Similarly, Gerlach (1987) found that the returns, in terms of salary gains, of general human capital (e.g., education) and specific human capital (attendance of work-related courses) were higher for men than for women in a large sample of German employees. Tharenou, *et al.* (1994) reached similar conclusions regarding specific human capital with Australian managers. In a piece of work which complements the work quoted above, Shore (1992) studied individuals who were assessed by assessment centres. The finding was that although women's ratings on performance-related factors were higher than men's this did not seem to have an impact either on the overall assessment rating or on the rates of promotions.

Reasons for the alleged discrimination are varied, and include, for instance, considerations that women are less likely to be committed to the organisation and their

careers than men, or that similar behaviours exhibited by men and women may be interpreted in different ways (Aigner & Cain, 1977; Cannings & Montmarquette, 1991; Gerhart, 1990; Melamed, 1995b; Spurr, 1990) <sup>1</sup>. Research does suggest that the former, generally held, assumption is unsubstantiated. Women are not more likely than men to quit their jobs and are not less willing than men to relocate (Blau & Kahn, 1981; Stroh, *et al.*, 1992; Viscusi, 1980). Furthermore, there seems to be no evidence that their performance is of inferior standards (Adler, 1987; Donnell & Hall, 1980); in fact, some results imply that the case could well be the opposite (Shore, 1992). Studies and surveys find women to be much more likely than men to perceive that they have been, or they are going to be, discriminated against in the workplace (Frieze, Olson & Good, 1990; Olson & Frieze, 1986; Schneer & Reitman, 1990; 1994; 1995; Segal & Zellner, 1992). Although perceptions do not always correspond to reality (e.g., Fagenson, 1988; Schneer & Reitman, 1994), sometimes they may be equally, or even more important than, reality (e.g., Fagenson, 1988; Landy, 1989). Schneer and Reitman (1995) noted that whether organisational discrimination can explain negative career outcomes for women is a “tricky question to answer” (p. 311); but, nevertheless, it is known how the focal individuals themselves view the situation (Schneer & Reitman, 1995).

To account for the above findings, it is suggested that women rely more on formal procedures to gain organisational rewards whilst men also employ informal means (e.g., networks) to achieve such rewards (e.g., Cannings & Montmarquette, 1991). Melamed (1995b), commenting on his data, noted that they suggested that acquisition of formal attributes such as education, work experience and other job-relevant human capital greatly improve women’s career prospects, but these actions seem to be unable by themselves to bridge the gender gap in indices of objective career success (Melamed, 1995b, p. 310). Similar conclusions were reached by Tharenou, *et al.* (1994).

The overt “discrimination” account is complementary to the other explanations which include different priorities, social role expectations and structural factors. In fact, they should be seen as inter-wined. To illustrate, discrimination can lead to the initial streaming of women into jobs with low levels of responsibility or less challenging assignments; which could, in turn, lead to their exclusion from training and development programmes or from important organisational networks. In his summary paper on

barriers to women managers' advancement, Adler (1993, p. 289 - abstract) asserted that "the under-representation, under-utilisation, and skewed distribution of women managers ... (*is*) a function of systemic cultural sanctions, educational barriers, legal restrictions, and corporate practices".

#### *3.4.5 GENDER AND SUBJECTIVE CAREER SUCCESS*

Research on gender differences in subjective career success reports results which do not follow those from research on objective career success. Most studies find either women reporting higher scores on measures of subjective career success (Herriot, *et al.*, 1993; Schneer & Reitman, 1990), or no gender differences (Cox & Harquail, 1991; Cox & Nkomo, 1991; Schneer & Reitman, 1993; Woodward & Chen, 1994; Whitely & Coetsier, 1993). Women report greater, or not lower, subjective career success than their male counterparts despite that they are found to be lower in indices of objective career success (Cox & Harquail, 1991; Schneer & Reitman, 1990; 1995). Herriot, *et al.* (1993) found that despite that women reported lower salaries and organisational level than their male counterparts, they did not feel more behind men in their career timetables. In fact, looking only at middle age individuals, women were feeling more ahead in their careers than their male counterparts were, despite that they were behind in terms of objective criteria.

There is one particular study which found women to report less subjective career success, along with objective career success, than men (Schneer & Reitman, 1994). However, women were also less likely to be married, to be appreciated by their boss and they were more likely to report negative discrimination (Schneer & Reitman, 1994). No control for these factors was imposed.

The most plausible explanation for the differential relationship of gender with objective and subjective career success is in terms of lower career expectations that women have. This can be because of the effects of socialisation (Cox & Harquail, 1991; Russo, 1985; Schneer & Reitman, 1995; Spurr, 1990; Strober, 1982). Melamed's (1995a) consideration of men's and women's objective and subjective career success under the light of social roles seems appropriate for this case as well. There is some research which



provides support to the socialisation suggestion. Schmeer and Reitman (1990) found that interruption in employment was negatively related to career satisfaction in men, but not in women. Men have higher salary expectations than women (Major, McFarlin & Gagnon, 1984; Stevens, Bavetta & Gist, 1993; Summers, 1988; Tromski & Subich, 1990). Finally, women evaluate their chances for promotion to be lower than those of their male counterparts (Cannings & Montmarquette, 1991).

Summarising on gender differences in career success, the suggestion that is drawn from the literature is that a number of factors that relate to societal norms and socialisation contribute to them. However, although socialisation seems to be directly responsible for gender differences in subjective career success, the suggestion from the literature is that societal norms and processes appear to largely affect gender differences in objective career success through their effects on informal inter-personal processes in the workplace (e.g., Cannings & Montmarquette, 1991; Kanter, 1997; Melamed, 1995b). Therefore, as in the case of career success in general, consideration of informal inter-personal processes seems imperative in order to obtain a clearer picture of the phenomenon. The inter-personal processes that have been predominantly considered in discussions and research on gender issues in career success are mentoring and networking. In the following chapter, the literature on mentoring and networking is reviewed, including the part that addresses the issue of gender.

#### *3.4.6 THE ISSUE OF MALE DOMINANCE IN THE ORGANISATIONAL ENVIRONMENT*

It has been suggested that the organisational environment has become more “fair”, in terms of career opportunities, for women. The reasoning refers to the influx of women into the work force and especially into occupations and organisational ranks where women have been traditionally under-represented (Cox & Harquail, 1991; Northcraft & Gutek, 1993).

Male dominance in the organisational hierarchy (i.e., exclusive or predominant occupation of the middle and high levels by men) has been considered to differentially affect processes and factors (e.g., career encouragement) which relate to men’s and women’s career prospects (Kanter, 1977; Riger & Galligan, 1980; South, Markham,

Bonjean & Corder, 1987). Research does imply that there is a positive association between women's objective career success and the percentage of women in the organisational environment (Chused, 1988). Tharenou and Conroy (1994) found that the degree of male dominance in the managerial hierarchy was negatively related to women's managerial level. Furthermore, there is research which suggests that gender differences in indices of objective career success are declining (Blau & Beller, 1988; Foot & Stager, 1989). Finally, as already seen above, very recent research (Aryee, *et al.*, 1996) suggested no gender difference in number of promotions and salary levels in a sample which employed individuals from a variety of organisations. However, Aryee, *et al.*'s (1996) study has been conducted in an oriental society and its generalisation to western societies is dubious, a fact acknowledged by its authors (Aryee, *et al.*, 1996, p. 114).

However, the suggestion that the organisational environment has become more appropriate for women is not accepted by everyone (Morrison, *et al.*, 1987; Schneer & Reitman, 1995). In fact, in the US the percentage of women in executive training and development programmes has decreased since 1980 (Fisher, 1992). Furthermore, the research referred to in the previous paragraph mostly tends to focus on earnings differentials in large sections of the total population. Studies conducted at a more specific level tend to report rather contrasting evidence. Spurr (1990) compared the cohorts of American women lawyers who joined law firms in the late 1960s and in 1980. He found no significant difference between the two cohorts in the likelihood to become partners in their law firms, despite that the proportion of women practising law in the US increased from 3% in 1968 to more than 33% in the early eighties (Spurr, 1990). Woodall, *et al.* (1995, p. 20) concluded that the already existing imbalance in male-female career success is made more elusive in periods of change and restructuring. Certainly, it seems that the present era represents such a period (Corzine, *et al.*, 1994; Kirkpatrick, 1991; Schneer & Reitman, 1990; Woodall, *et al.*, 1995). Finally, as already seen, research suggests that gender differences in indices of objective career success are still of considerable strength (Melamed, 1995b; Schneer & Reitman, 1994).

## CHAPTER 4: MENTORING AND NETWORKING

## CHAPTER 4. MENTORING AND NETWORKING

### 4.1 MENTORING

#### 4.1.1 DEFINITION OF MENTORING

The term “mentor” is derived from Hellenic mythology. Mentor had served as the teacher of Odysseus’ son Telemachus in Homer’s “Odyssey”. Mentoring indicates a relationship between a young adult and an older more experienced member of the society. Through this relationship the young individual learns how to adapt and survive in the adult world (Chao, Walz & Gardner, 1992; Kram, 1988). There have been a number of definitions to describe mentoring and the mentoring process (e.g., Collins, 1994; Kanter, 1977; Kram, 1983; 1985; Levinson, *et al*, 1978; Nykodym, Freedman, Simonetti & Nielsen, 1995; Phillips-Jones, 1982). Considering these accounts, mentoring in the organisational environment can be defined as a developmental relationship between an organisational member, the protégé, and another more senior and experienced member of the organisation, the mentor. An individual may have more than one mentor, or no mentors, over the course of an organisational career. Traditionally, the mentor is considered as being older than the protégé. However, Kram (1988) notes that in the modern economy an increasing number of individuals tend to change careers. Therefore, cases where the mentor is younger than the protégé should not be considered unusual. Hence, Collins’ (1994, p. 414) point regarding the pair involved in the mentorship relationship as referring to “...individuals who are at different stages in their professional development” is considered very appropriate. Therefore, considering careers in a single organisation, experience and level in the particular organisation rather than age is a better indicator of the likelihood and opportunities to be a mentor or a protégé.

Mentoring has been mentioned as a career development and advancement process for more than a quarter of a century (e.g., Jennings, 1971). It is mainly after the late 1970s, however, that mentoring has received considerable amount of attention (Burke, 1984; Collins, 1983; Collins & Scott, 1978; Hunt & Michael, 1983; Kanter, 1977; Kram,

1983, 1985; 1986; 1988; Levinson, *et al.*, 1978; Noe, 1988a; 1988b; Phillips-Jones, 1982; Roche, 1979; Zey, 1984).

The most integrated account of mentoring and the mentoring process has been probably provided by the seminal work of Kram (Kram, 1983; 1986; 1988). Kram (1988) distinguished between two separate broad sets of functions inherent in the mentoring relationship: career-related functions and psychosocial functions. The former include career guidance, protection, assignment of challenging tasks, exposure and visibility to other important organisational members, and direct forms of sponsorship. The latter include role modelling, friendship, counselling, acceptance and confirmation. Factor analytic studies provide general support for this categorisation (Burke, 1984; Noe, 1988a; Scandura, 1992; Scandura & Schriesheim, 1990; Scandura & Ragins, 1993; Schockett & Haring-Hidore, 1985); though role modelling sometimes emerges as an independent factor (e.g., Scandura, 1992; Scandura & Schriesheim, 1990). Kram (1988) notes that aspects of the career-related functions are common to most developmental relationships between senior and less experienced organisational members. In contrast, the psychosocial functions are less common. This is because psychosocial functions require a considerable degree of interpersonal intimacy which may be inhibited by a number of individual and organisational factors.

Mentoring is not the only term which has been used to describe developmental relationships between a less and a more experienced organisational member. Such relationships have been given a variety of labels such as sponsorship, godfather relationship and patron relationship (Kanter, 1977; Shapiro, Hasentine & Rowe, 1978). These terms differ in the aspects of the relationship they stress. For instance, the notion of sponsorship (Kanter, 1977) tends to emphasise the career functions of the relationship. Therefore, the other forms of superior-subordinate relationship can be encompassed in the mentoring relationship.

The way that mentoring has been initially introduced (e.g., Jennings, 1971; Roche, 1979; Zey, 1984) may have created the idea that it is a phenomenon which occurs exclusively in managerial hierarchies; even though the definition of the “manager” is far from clear. Fagenson (1988) has pointed out that the results of early qualitative research may have been confounded by the type of individuals who participated in early studies,

who were usually males occupying powerful positions (e.g., Jennings, 1971; Roche, 1979). Research, however, suggests that mentoring is a phenomenon which is present in virtually all kinds of occupations, organisations and organisational levels (Collins, 1994; Douglas & Schoorman, 1988; Fagenson, 1988; Koberg, Wayne Boss, Chappell & Ringer, 1994; Pelluchette, 1993). Collins (1994) conducted her study on mentoring and career success with social workers. Douglas and Schoorman (1988) employed a sample of nurses in a US hospital and found that having received mentoring was related to job performance, commitment and work satisfaction. Koberg, *et al.* (1994) found that reception of mentoring was associated with increased satisfaction and decreased work alienation across a wide variety of occupations (e.g., nurses, dieticians, therapists, pharmacists) in a sample of employees from a US general hospital. Peluchette (1993) found reception of mentoring to be related to subjective career success in a sample of academics from two US Universities. In fact, mentoring has been documented in any context where relative differences in experience and power between individuals exist (e.g., academic-student relationships in higher education) (e.g., Baack, 1982; Cosgrove, 1986; Rice & Brown, 1990).

A number of organisations, private (e.g., Bell Laboratories) and public (e.g., US army), have introduced formal mentoring systems as part of their career development programmes (e.g., Noe, 1988a; Wilson & Elman, 1990; Zey, 1985). A formal mentoring system refers to the case where the mentoring relationship is formally assigned, managed, structured and recognised by the organisation (Chao, *et al.*, 1992). Furthermore, mentoring has been commercially treated as a phenomenon that needs to be implemented and fostered in organisations (Clutterbuck, 1994; Fisher, 1994; Hunt & Michael, 1983; Shea, 1992). Therefore, the study of mentoring becomes very important from every perspective, theoretical and practical, individual and organisational.

### *Primary and Secondary Mentoring*

A distinction between classical, or primary, and secondary mentoring is made in the literature (Clawson, 1980; Kram, 1986; 1988; Levinson, *et al.*, 1978; Phillips-Jones, 1982; Whitely, *et al.*, 1991; Zey, 1984).

The former refers to an exclusive one-to-one relationship between protégé and mentor. This relationship is of relatively long duration and the mentor is a more senior member of the organisation. The latter refers to a number of specialised developmental relationships of the individual in the work organisation with more than one persons. These relationships are shorter and less intense than the relationship in the case of primary mentoring. A very important distinguishing point is that whilst primary mentoring focuses on both career and psychosocial support functions secondary mentoring focuses mainly on career enhancement functions (Kram, 1986; 1988; Levinson, *et al.*, 1978; Phillips-Jones, 1982; Whitely, *et al.*, 1991).

### *Stages in the mentoring relationship*

Kram (1983), in an important piece of qualitative research, tried to develop an understanding of the mentoring relationship, including how and why it is formed, what functions are provided, how it develops and how it is discontinued. She interviewed a number of individuals who were involved in mentoring relationships, either as protégés or as mentors. Her focus on the formation and development of the relationship led to the identification of four stages in the mentor-protégé relationship:

(1) Initiation, which can last for a period of six months to one year. During this stage there is a positive identification of the junior individual (to-be-protégé) with the more senior individual (to-be-mentor). The senior organisational member is seen as someone who can provide essential help to the new individual in one's attempts to operate effectively in the organisational environment. On the other side, the more senior individual identifies potential and "coachability" in the new employee. The less experienced individual is viewed as both someone who can provide essential assistance and someone to whom the more senior member can transmit values and perspectives of the world.

(2) Cultivation, which can last for two to five years (Kram, 1983). It is the phase during which the variety of functions that characterise a mentoring relationship reaches its peak. In general, the career functions emerge first. Psychosocial functions depend on the degree of trust, mutuality and intimacy that characterise the relationship and usually emerge later. The psychological outcomes of this phase are not always positive as some

individuals become disappointed by discovering the limitations of the relationship (e.g., by finding out that their mentor is not the ideal model for them) (Kram, 1983, p. 617).

(3) Separation, which is both structural and psychological. The relationship enters a phase of redefinition for both sides. The case where structural and psychological separation are timed is the ideal one. Premature structural separation (e.g., the mentor is promoted, moved or leave), however, can lead to a period where the protégé experiences negative emotions such as anxiety and feelings of loss. If the emotional separation precedes the structural separation negative emotions can be experienced by both individuals in the relationship (Kram, 1983).

(4) Redefinition, which is usually the phase in which the relationship becomes a friendship relationship. The individuals continue to have some contact (a kind of “distant sponsorship” still exists) and the relationship has a more equitable basis. Usually, ex-mentors experience contentment as they feel that they have contributed to their ex-protégés’ accomplishments. Ex-protégés feel gratitude to the ex-mentors. This is not always the case, however, as sometimes this stage is characterised by negative feelings. This can be caused either by the ex-protégé who feels that the ex-mentor is no longer taking interest in her/his career or by the ex-mentor who feels that the ex-protégé does not show any feelings of debt or respect for all the guidance and support (Kram, 1983; 1988).

The temporal aspect of Kram’s findings are supported by some recent research. Burke and McKeen (1995) reported on a study on mentoring with managerial women. Around three fourths of the mentoring relationships had started in the first year of employment in the organisation and the great majority of the relationships lasted less than five years

Therefore, a considerable amount of time is needed for any benefits, subjective or objective, that are derived from the mentoring relationship to start becoming apparent. Hence, valid information on mentoring relationships and their outcomes can only be extracted by individuals who have been employed above a certain amount of time in an organisation.

Complementing the identification of the stages in the mentoring relationship Kram (1988) integrated career (e.g., Hall, 1976) and life stage theories (e.g., Erikson,



1963; Gould, 1972, 1978; Levinson, *et al.*, 1978) to provide an account of the needs and concerns which contribute to the formation of developmental relationships in the work context. The assumption is that mentoring relationships in the organisational context are formed because mentors and protégés have complementary needs which are determined by the different career and life stages at which they find themselves. The complementarity of need systems theory of interpersonal relationships, according to which individuals tend to form relationships in which there is mutual gratification of their basic needs (Winch, Ktsanes & Ktsanes, 1954), can provide the theoretical background for this explanation..

Kram (1988) identified three eras or stages: early career (22-40 years of age), middle career (40-60 years of age) and late career (60 years of age - retirement). In the early career the individual has concerns about one's professional (e.g., work effectiveness, commitment to the work organisation, advancement at the expense of important values) and personal (e.g., family, relationships with others) domains. When the individual enters the organisation, there is a need to identify the important individuals and resources, to understand and, when possible, influence the way organisational life is constructed (Kanter, 1977; Zey, 1984). In the mid-career stage, many concerns revolve around the realisation of the existence of limited opportunities for further advancement. The individual may question further commitment to and sacrifice for the organisation. Furthermore, relationships with peers become more important than in the previous career stage, as the individual has to rely more on peers for information and socio-emotional support. On the other hand, however, given the limited opportunities for advancement, peers or even subordinates may be perceived as a threat for further advancement. Hence, the individual has to deal with an ambiguous situation (Kram, 1988). In late career stages, work and career concerns are related to issues of motivation to commit to the organisation when one knows that one's career is coming to an end. The individual starts focusing on the effort to adapt to a less central role in one's work organisation (Kram, 1988).

Therefore, young individuals who are starting their careers need meaningful relationships that provide confidence, support, satisfaction and successful examples. A mentoring relationship in its classical form has the potential to satisfy these needs (e.g.,

Fagenson, 1988; Kram, 1983; 1988). On the other hand, individuals who are in their mid-careers are not particularly concerned with advancement anymore or they may perceive that the opportunities for advancement are very limited. The pyramidal structure and the downsizing and flattening, especially of large organisations (e.g., Cameron, Freeman & Mishra, 1991; Driver, 1979; Goffe & Scase, 1992; Herriot, *et al.*, 1993; Pearson, 1991; Woodall, *et al.*, 1995), makes advancement difficult once a certain level has been reached (Aryee, *et al.*, 1994; Driver, 1985; Gattiker & Larwood, 1988; Veiga, 1981; Woodall, *et al.*, 1995). Many of the individuals in the middle or the end of their careers have the desire to pass their expertise, experience and “wisdom” to newer organisational members, or, in general, to novices in the adult world, by providing guidance, advice, support and feedback (Dalton, *et al.*, 1977; Hall, 1976; Kram, 1988; Erikson, 1963; Levinson, *et al.*, 1978). Developmental relationships with subordinates offer the opportunity for this. Evans and Gilbert (1984) found a significant relationship between age and interest in the mentoring role regardless of being plateaued or not.

Not always, however, do mentoring relationships include positive experiences for both parties and not all individuals are willing to participate in a mentoring relationship. Many individuals in mid-career or late-career may feel disappointed and dissatisfied with their careers, or with their personal lives and achievements in general (e.g., Erikson, 1963; Levinson, *et al.*, 1978). They may feel threatened by and resent newcomers, hence, being unwilling to provide any of the mentoring functions. Moreover, they may be in a period of re-evaluation and re-direction of their experiences, hence, they may not be interested in providing mentoring-related functions for less senior organisational members. On the other side, individuals in early career stages may see senior organisational members as obstacles to the realisation of their ambitions (Kram, 1988). Individuals in the late career stages may be thinking of their lives after retirement, trying to find new identities out of work, and they may not be interested in establishing relationships with other organisational members, especially newcomers (Kram, 1988). Cases like the above may be especially likely to be encountered nowadays with the continuous restructuring and delayering of most organisations. The implication, therefore, is that personal characteristics and individual differences, such as personality, play an important role in the amount and quality of mentoring that individuals receive or

provide in the organisational environment. Finally, there are a number of outside-the-individual, structural factors, which can affect the individual's priorities and needs and, hence, availability as a mentor or protégé (Kram, 1985; Zey, 1984). Hunt and Michael's (1983, p. 480) note that "mentorship in the work environment is a complex issue involving organisational, occupational, positional, and interpersonal variables" is quite illustrative.

The economic circumstances of the past decade or so have led to changes in traditional career patterns. Individuals may change careers throughout their lifetime. Therefore, the assumed age match between career and life stages may not exist. There may be a considerable number of cases where subordinates are older than or of similar age to their superiors (Baird & Kram, 1983; Kram, 1988). For this reason, when mentoring in the organisational environment is studied, career stage with respect to tenure in the particular organisation is a more appropriate operationalisation of career stage than career stage with respect to age.

To summarise, a mentoring relationship will fulfil important needs of the protégé, especially in the early and middle stages of one's career within a particular organisation. Being mentored should contribute to both objective career success and subjective career success. Once the individual has reached a certain point in one's career with the organisation, however, provision of mentoring functions for less experienced organisational members becomes important as well. Provision of mentoring, therefore, should play an important role in later career stages with the particular organisation. Taking into account the fact that opportunities for further advancement are limited after a certain organisational level has been reached, provision of mentoring should be especially relevant to subjective career success. Research, however, has focused on the relationship between career success and reception of mentoring and has tended to neglect the investigation of the relationship between career success and having been a mentor.

#### *4.1.2 THE EFFECTS OF MENTORING ON THE CAREER OF THE PROTÉGÉ*

The early suggestion in the literature was that reception of mentoring benefits career success. Jennings (1971) reported that most successful corporate presidents have

had mentors. Roche (1979) reported on the results of a study with prominent male executives. The executives who reported having been mentored received higher salaries, bonuses, total compensations and reported being more satisfied with their careers than those who reported not to have had mentors.

Since then, a number of studies which involved systematic investigations have been conducted. They reported relationships between mentoring and career advancement (e.g., probability to be promoted, number of promotions) (e.g., Aryee, *et al.*, 1996; Dreher & Ash, 1990; Fagenson, 1989; 1994; Scandura, 1992; Turban & Dougherty, 1994; Whitely & Coetsier, 1993; Whitely, *et al.*, 1991) and income levels (e.g., Chao, *et al.*, 1992; Dreher & Ash, 1990; Turban & Dougherty, 1994; Whitely, *et al.*, 1991). Dreher and Ash (1990) conducted a study with alumni from two US Business Schools. They found mentoring to be positively related to the number of promotions and income since graduation. Fagenson (1994) found a significant difference in the reported number of promotions between mentored and non-mentored individuals in favour of the former. Recent research in the UK suggests that in times of organisational change and restructuring, informal mentoring (and participation in emergent organisational networks) is perceived by the employees as one of the most valuable career development tools (Woodall, *et al.*, 1995). This is in line with Kram and Bragar's (1992) suggestions regarding the importance of mentoring in cases of organisational downsizing.

Not only has mentoring been found to be related to objective career success, but it has also been found to relate to indices of subjective career success (Aryee & Chay, 1994; Aryee, *et al.*, 1996; Collins, 1994; Fagenson, 1989; Koberg, *et al.*, 1994; Peluchette, 1993; Riley & Wrench, 1985; Whitely & Coetsier, 1993). Corzine, *et al.* (1994) found that bank officers who were being mentored were less likely than their nonmentored counterparts to perceive that they had reached a career plateau. Fagenson (1994) compared perceptions of protégés and nonprotégés regarding their relationships with their peers, their superiors and their organisational departments. The innovation in her study was that she also took measurements of these relationships from the protégés' and nonprotégés' mentors and supervisors, respectively. She found that protégés' ratings of their workplace relationships were significantly more favourable than their mentors' corresponding evaluations. In contrast, nonprotégés rated their relationships with peers,

superiors and departments significantly less favourably than their supervisors rated them. These results suggest that reception of mentoring can enhance positive feelings and perceptions about workplace relationships, regardless of the actual state of the relationships.

There is some work, however, which reports results that are not aligned with the general line of findings. Fagenson (1992) failed to identify any significant difference in the promotion rates of protégés and nonprotégés in a sample of employees from two US service companies in the high-tech field. Whitley & Coetsier (1993) and Corzine, *et al.* (1994) failed to identify any relationship between career mentoring and financial rewards in MBAs in their early careers and in bank officers, respectively. Collins (1994) found no advantage in income levels between social workers who indicated having been protégés and social workers who indicated not having been protégés. The common feature in Collins' (1994) and Corzine, *et al.*'s (1994) studies, however, was that reception of mentoring was assessed with a single item, a fact that imposes questions on the validity of the measures. Furthermore, in Corzine, *et al.*'s (1994) study it was career related mentoring which was assessed. As noted above, Corzine, *et al.* (1994) did find a relationship between this measure of mentoring and feelings about career prospects. This suggests that Corzine, *et al.*'s (1994) findings were restricted by the content of their mentoring measure. In addition, Collins (1994), as she acknowledges herself, did not control for the effects of work experience and age which are very likely to influence income levels. To conclude, although the results of these studies have to be kept in mind, research which did suggest an advantage of mentoring over nonmentoring is overwhelming. Furthermore, this research appears to have had methodological shortcomings. Finally, these studies only failed to identify a significant difference in favour of mentoring. No research has yet reported results which favour nonmentoring over mentoring.

Some authors have called for caution over an oversimplification of the issue of mentoring and its consideration as an all-positive phenomenon (Collins, 1994; Kram, 1988). There are suggestions, already presented in the previous section, that a mentoring relationship may potentially have detrimental effects on the protégé and the mentor (Fagenson, 1988; 1994; Kram, 1988; Keele, 1986). A number of scholars have suggested

that protégés may encounter problems in their relationships with other organisational members because protégés enjoy a number of advantages that nonprotégés do not (e.g., Kanter, 1977; Kram, 1988). This may raise feelings of animosity or jealousy on protégés' colleagues who do not enjoy this kind of special treatment (Kram, 1988; Noe, 1988a; Phillips-Jones, 1982). To complement the previous point, a satisfying and beneficial relationship with a mentor may prompt the protégé to become dependent on the relationship with the mentor and ignore the potential of other important activities such as relationships with peers and networking (Keele, 1986; Fagenson, 1988; 1994). Relationships with mentors are of limited duration and when they end, for any reason, protégés may be left vulnerable and isolated because they lack alliances with others in the organisation (Kanter, 1977; Kram, 1988). Furthermore, along a different line, Kram (1983; 1988) notes that the nature of the mentoring relationship may cause problems. This could happen when, for instance, the more senior organisational member starts feeling threatened by the protégé's increasing visibility, respect by others and opportunity for advancement. On the other hand, the protégé may sometimes feel undermined and not given enough opportunities by the mentor.

In the next section, suggested mechanisms by which mentoring relationships affect the career success of the protégé are presented.

#### *Mechanisms for the Effects of Mentoring on the Protégé's Career*

Dreher and Ash (1990) suggested two mechanisms to explain the beneficial effects of mentoring on the career of the protégé. These two mechanisms or processes are not mutually exclusive, but rather, work in concert.

The first proposed mechanism refers to inclusion, through the mentor, to important informal networks within the organisation (Dreher & Ash, 1990). This mechanism has also been implied by other authors (Kram, 1986; 1988; Weick, 1979). Inclusion into informal organisational networks increases (a) the likelihood for formation of ties and alliances with other organisational members; and (b) visibility to upper level decision makers (e.g., by providing signals). Furthermore, participation in informal networks offers access to valuable information which is often unavailable through the formal communication channels. Fagenson (1988) found that respondents who reported

having a mentor reported that they had more access to important individuals within the organisation and more influence to organisational policies in areas irrelevant to their direct responsibilities than respondents who reported not having a mentor. Whitely and Coetsier (1993) suggest that as the network coalition of the mentor ascends the organisational hierarchy so does the protégé who is now part of this network. The above considerations and findings indicate the inter-relatedness between mentoring and networking in the organisational environment and suggest that both phenomena have to be studied for a complete picture to emerge.

The second mechanism proposed by Dreher and Ash (1990) involves role modelling and vicarious learning, processes proposed by Bandura (e.g., Bandura, 1977; 1977a; Bandura, 1982). Through continuous modelling of a more senior organisational member the protégé learns appropriate behaviour patterns for the organisation. This leads to an increase in the protégé's self-efficacy regarding effective organisational behaviour patterns (Koberg, *et al.*, 1994).

Mentors, however, may have even more direct effects on the career of the protégé, especially career mobility, than those suggested by the mechanisms described above. It has been suggested that mentors have an important influence on promotion decisions (Chao, *et al.*, 1992; Hunt & Michael, 1983; Stumpf & London, 1981). This is compatible with research that suggests that positive feelings towards someone affects performance evaluations (Cardy & Dobbins, 1986; Ferris, Judge, Rowland & Fitzgibbons, 1994; Tsui & Barry, 1986; Wayne & Ferris, 1990); and reward behaviour (Kipnis & Vanderveer, 1971; Podsakoff, 1982). Presumably, a classical mentoring relationship involves positive feelings. Ferris, *et al.* (1994) compared a causal path model which suggested that the supervisor's extensiveness of positive feelings towards the subordinate affects subordinate's performance evaluation with a causal path model which hypothesised the relationship in the opposite direction. They found that the former, but not the latter, model was supported by the data. The implication is that mentoring and, by extension, other informal interpersonal processes, potentially have a stronger effect on the achievement of organisational rewards, such as a promotion, than objective performance. This is compatible with suggestions that factors related to informal interpersonal processes largely affect the allocation of organisational rewards (e.g.,

Flipppo, 1966; Pfeffer, 1989; Whitely, *et al.*, 1991). It is also supportive of suggestions that work performance should not be considered as an antecedent of objective career success (e.g., Cannings & Montmarquette, 1991; Schneider & Hough, 1995).

*The Issue of Causality in the Relationship between Mentoring and Career Success*

Research on mentoring and its outcomes has so far been cross-sectional in nature. Therefore, conclusions about causality should be made with caution (Aryee & Chay, 1994; Chao, *et al.*, 1992; Collins, 1994; Scandura, 1992; Whitely & Coetsier, 1993; Whitely, *et al.*, 1991). Adopting an extreme position, it can be proposed that the relationship may well be in the opposite direction. For instance, good performance and promotions may facilitate the process of obtaining a mentor. This is consistent with the suggestion made by proponents of the tournament model that established organisational members “wait” for the survivors of the first tournaments in order to choose their protégés (Sheridan, *et al.*, 1990). Adopting a more realistic position, the relationship between mentoring and career success may be bi-directional or reciprocal. Initial job success (e.g., high early advancement rates) and work involvement, along with other factors (e.g., personality), may make a mentor available. Mentor availability may boost subsequent career advancement and feelings about career success, feeding back to a loop. Turban and Dougherty (1994), however, used structural equation modelling techniques and they found that the “best fit” model was the one which hypothesised a causality relationship from reception of mentoring functions towards career success and not *vice versa*. In particular, mentoring exerted a direct effect on objective career success, measured in terms of the number of promotions since graduation and salary levels at the time of the study. The effect of mentoring on subjective career success was both direct and indirect, through its effects on objective career success. Because the participants in Turban and Dougherty’s (1994) study were in their early career stages, it can be argued that it is reception of mentoring which, at first, has effects on career success and not *vice versa*; or that reception of mentoring exerts effects on career success stronger than the effects that career success exerts on reception of mentoring.



#### 4.1.3 THE EFFECTS OF MENTORING ON MENTOR'S CAREER SUCCESS

Mentoring relationships are likely to lead to positive consequences for the mentor as well (Collins, 1994; Kram, 1988; Dreher & Ash, 1990; Nykodym, *et al.*, 1995; Taibbi, 1983; Zey, 1984). For instance, through delegation to the protégés, mentors can be more effective and efficient by making their jobs more manageable (e.g., Nykodym, *et al.*, 1995). Establishment of developmental relationships with able subordinates provides considerable technical and psychological support and creates a network of loyal subordinates (e.g., Kram, 1988). Therefore, a number of successful mentoring relationships with subordinates can form a power basis for further advancement in the organisation (Dreher & Ash, 1990). Furthermore, by providing mentoring functions, such as guidance, friendship and advice, the mentor gains self-respect, internal satisfaction and the respect of peers and superiors (Clawson, 1980; Dalton, *et al.*, 1977; Kram, 1988; Levinson, *et al.*, 1978); hence his or her subjective career success is enhanced. In addition, provision of mentoring functions may considerably relieve problems inherent in mid- and late career (e.g., decreased motivation, reduced career satisfaction, pessimism, etc.) and turn them into perceived opportunities for growth (Hall, 1980; Hall & Kram, 1981; Kram, 1988; Nykodym, *et al.*, 1995).

Provision of mentoring, therefore, should be also expected to contribute to objective and subjective career success of the mentor. There is only one piece of, quantitative in nature, empirical work, however, which has employed provision of mentoring as a variable. Collins (1994) found significant differences in indices of both objective career success (self-reported highest income) and subjective career success between social workers who indicated experience as mentors and those who did not. Collins (1994), however, identified mentor experience with the use of a single “yes/no” item asking “have you ever been a mentor for another person?”. Furthermore, Collins (1994) did not impose any control for variables which may affect the relationship between provision of mentoring and indices of career success, such as experience in the profession. Therefore, empirical work on the relationship between mentoring and career success which employs quantitative measures is needed.

#### 4.1.4 THE ALLEGED BENEFITS OF MENTORING TO THE ORGANISATION

It has been suggested that mentoring is beneficial not only for the two organisational members involved in the relationship, but for the organisation as well (Aryee & Chay, 1994; Fagenson, 1989; Kram, 1988; Koberg, *et al.*, 1994; Nykodym, *et al.*, 1995; Wilson & Elman, 1990). The mentoring relationship serves as a process for integrating the young employee into the organisational culture (Chao, *et al.*, 1992; Wilson & Elman, 1990; Zey, 1984). At the same time the new organisational members feel safety and protection (Levinson, *et al.*, 1978; Levinson, 1976; Dalton, *et al.*, 1977; Kram, 1988). A relationship with a mentor enhances the protégé's feelings of closeness to the organisation (Collins, 1983; Zey, 1984). As they "learn the ropes" and they are advancing in the organisational hierarchy, feeling, at the same time, safe and close to the organisation, organisational members are less likely to leave (Kram, 1988; Levinson, *et al.*, 1978; Zey, 1988). Therefore, mentoring should decrease job turnover and absenteeism, especially in the early years with the organisation (Bernstein & Kaye, 1986; Burke, 1984; Koberg, *et al.*, 1994; Missirian, 1982). Regarding performance, there are suggestions that rewarding the provision of mentoring to subordinates can lead to an increase in talented individuals in the organisation and that reception of mentoring should increase productivity and performance (Aryee & Chay, 1994; Digman, 1978; Habler & Lowe, 1985; Peters & Waterman, 1982). Finally, provision of mentoring could also improve the quality of the relationship of middle and late career stage employees with the organisation. As already seen, the assumption of the role of mentor may reduce the potential negative effects of these stages (e.g., perceived plateauing). As these negative effects are reduced, more commitment to the organisation should be expected.

There is some limited empirical work which supports these suggestions. Chao, *et al.* (1992) found a significant relationship between reception of mentoring and self-reported familiarity with the values, goals and the history of the organisation, that is the culture of the organisation. Corzine, *et al.* (1994) found mentored bank officers to report more job satisfaction than nonmentored ones. Aryee and Chay (1994) found functions related to reception of mentoring (sponsorship and coaching) to relate to organisational commitment (e.g., interest about the fate of the organisation, perceived person-

organisation value similarity). Furthermore, respondents who indicated being mentored reported higher overall levels of organisational commitment than those who indicated not having a mentor (Aryee & Chay, 1994).

After having considered the effects of mentoring on the protégé, the mentor and the organisation, the relationship of mentoring with structural and individual (e.g., human capital) factors is reviewed in the following sections. Structural features are considered first, given the limited literature on the issue.

#### 4.1.5 MENTORING AND STRUCTURAL CHARACTERISTICS

Availability of mentors and development of mentoring relationships depend, to a considerable extent, on structural characteristics (i.e., the characteristics of the organisation and the characteristics of the economic environment in which the organisation is embedded) (Kram, 1988).

The prevailing organisational cultural and structural features (e.g., reward structure, performance appraisal systems, task and job design and organisational climate) may influence the quantity and quality of the mentoring relationships (Chao, *et al.*, 1992; Deal & Kennedy, 1982; Kram, 1988; Ragins, 1989).

There are organisational environments in which trust and openness are valued and frequent interaction among hierarchical levels is encouraged (e.g., placing emphasis on group decision making, problem and responsibility sharing, and supervisor-subordinate interaction). Such cultural contexts should support the development of mentoring relationships. On the other hand, organisational cultures which only encourage strictly formal and superficial relationships between individuals of different status should inhibit the development of mentoring relationships (Deal & Kennedy, 1982; Kram, 1988; Ragins, 1989). Similarly, job design and organisational design could also contribute to the fostering or the inhibition of a mentoring culture. Job and organisational designs which require interaction across hierarchical levels (e.g., in a project or matrix organisation), as opposed to individualised task designs and rigid organisational structures, provide more opportunities for initiation and establishment of mentoring relationships (Kram, 1988). Furthermore, organisations which do not respond to the

predictable problems that individuals face in their mid- and late careers (e.g., fear of obsolescence, pessimism due to blocked opportunity for further advancement, doubts about one's value for the organisation) should reduce their senior employees' willingness to mentor (Kram, 1988). There is limited research which seems to support the above suggestions. Koberg, *et al.* (1994) found that reported mentoring was related to perceived team effort, collectivistic sharing of problems and responsibilities, and leader approachability (measured in terms of degree of comfort with the leader).

The structure of the organisational hierarchy (e.g., number of layers) can affect the development of mentoring relationships by creating perceptions of opportunity or lack of opportunity. If organisational members perceive that there are opportunities for advancement they should be more likely to engage, or to attempt to engage, in mentoring relationships. New organisational members will attempt to approach more senior organisational members because they will feel the need for advice and sponsorship to be able to exploit the opportunities for advancement. More senior organisational members who feel that their potential could still be fulfilled and rewarded will be more likely to contribute to the development of subordinates (Kram, 1988). Nowadays many organisations are downsizing and tend to eliminate hierarchical layers. Therefore, perceived opportunity may be affected in a negative way. This may be an inhibiting factor for the willingness of organisational members to mentor, hence, for the development of mentoring relationships.

The reward system of the organisation should also affect the development of mutually beneficial relationships because it exerts considerable effects on behaviour (e.g., Lawler, 1977; Beer, 1980). A competitive reward structure which encourages individual effort and achievement should inhibit the development of collaborative relationships. Furthermore, recognition of short-term bottom-line results should discourage senior organisational members from nurturing and developing the talent of subordinates. In systems with the above characteristics, activities such as coaching, counselling or seeking and building relationships are likely to be viewed as distractors from work activities which are formally rewarded (Kram, 1988). In contrast, performance management systems which require the provision of regular feedback and communication between organisational members of different hierarchical levels (e.g.,

management by objectives) should support mentoring (Beer, 1980; Kram, 1988). Some empirical work suggests that provision of formal rewards for subordinate development is related to increased engagement in activities involving mentoring functions (Digman, 1978; Peters & Waterman, 1982). An example of organisational reward structure is the promotion system. In a system where promotion decisions are made by committees and where sponsorship of the candidates' superior is needed, individuals aspiring to promotions may be encouraged to establish relationships with more senior organisational members (Kram, 1988).

Not only the organisation *per se*, but the environment in which the organisation operates (e.g., condition of the economy in general or the particular sector of the industry) can help or inhibit the development and success of mentoring relationships (Kram, 1988). In a slowly growing or receding economy or industry sector, opportunities for advancement may be limited. Advancement, however, may be vital for a newcomer who considers the relationship with a mentor to be a powerful tool. Inability to achieve the promotions or the challenging assignments to which one is aspiring may lead the protégé to blame the abilities, dedication and intentions of the mentor, despite the mentor's efforts. On the other hand, in a booming economy, or a particular sector of the economy, opportunities for advancement may be high. In that case, both protégé and mentor may mutually give credit to each other for the protégé's (and, maybe, the mentor's) advancement.

The effects that the characteristics of the work organisation and the economic environment can have on the phenomenon of mentoring were reviewed in this section. There has been reliance on the work of Kram because accounts of other authors on the issue are extremely scarce. One of the conclusions is that when mentoring variables are considered at the level of the individual structural characteristics are sources of potential confounding that has to be taken into account, a point that has also been mentioned by other authors (e.g., Whitely & Coetsier, 1993). In the next sections the relationship between mentoring and individual characteristics is reviewed.

#### 4.1.6 MENTORING AND HUMAN CAPITAL

According to Kram (1983; 1988), the number and quality of mentoring relationships over one's organisational career depends, among other individual characteristics, on human capital attributes. Research in the field of interpersonal attraction suggests that certain human capital attributes affect the quantity and quality of developmental relationships (Byrne, Clore & Smeaton, 1986; Rosenbaum, M., 1986). The terms "organisational demography" (Pfeffer, 1983) or "relational demography" (Tsui & O'Reilly, 1989) refer to the relationship between demographic characteristics of potentially interacting organisational members and emerging patterns of attitudes and behaviour. Demographic similarity (e.g., in age, education, gender, and tenure with the organisation) among organisational members is associated with higher probabilities for communication, friendship ties, and group integration (Duchon, Green & Taber, 1986; Lincoln & Miller, 1979; O'Reilly, Caldwell & Barnett, 1989; Zenger & Lawrence, 1989). Ferris, *et al.* (1994) developed a causal path model in which demographic similarity between supervisor and subordinate had positive effects on the supervisor's feelings for the subordinate. Tsui & O'Reilly (1989) found that superior-subordinate similarity in education, tenure, race, age and gender explained significant amounts of variance in supervisors' ratings of subordinates' effectiveness and the extensiveness of positive feelings for the subordinates.

Research with individual human capital variables, apart from gender, however, is scarce. Whitely and Coetsier (1993) found a significant relationship between socio-economic origin and mentoring. Furthermore, Whitely, *et al.* (1991) found that socio-economic origin moderated the relationship of career mentoring with objective career success. Although there was no difference in the amount of career mentoring reported by the two socio-economic groups, career mentoring was predictive of promotion rates for respondents from upper-class social origins, but not for respondents from lower socio-economic origins. The suggestion was that individuals from higher socio-economic backgrounds tend to attract mentors from similar backgrounds (Whitely & Coetsier, 1993; Whitely, *et al.*, 1993). Individuals from higher socio-economic backgrounds tend to occupy higher level positions (e.g., Poole, Mansfield, Blyton & Frost, 1981). Mentors

from higher organisational levels have more influence and access to informal networks than mentors from lower levels and this has effects on the protégés' careers. Finally, Olian, Carroll and Giannantonio (1993), in an experimental study, found a relationship between mentoring and protégé's marital status, which was, however, moderated by gender. Mentors were more willing to mentor married over single men or single over married women, because they anticipated more benefits from such relationships, as the general belief is that married men and single women are more dedicated to their work and their careers.

In the next section, the relationship between mentoring and gender, the most investigated, job-irrelevant, human capital variable is reviewed.

#### *4.1.7 GENDER AND MENTORING*

The job-irrelevant human capital variable that has been most investigated with respect to mentoring is gender. Women have been traditionally considered as among the so called "powerless" organisational groups (e.g., Fagenson, 1989; Hunt & Michael, 1983). Mentoring has been considered as a function which is especially important for these powerless groups (Fagenson, 1988; Zey, 1984). Tharenou, *et al.* (1994) constructed causal path models for Australian men and women managers' career success in which the effect coefficient for the path from career encouragement (a mentoring function) towards training and development was much stronger in the women's model. Training and development exerted direct effects on career advancement. Tharenou, *et al.*'s (1994) finding, therefore, suggests that mentoring can be much more beneficial for women than for men. However, in general, women have been considered to encounter more problems than men in establishing relationships with mentors and in integrating themselves into mentoring systems (Betz & Fitzgerald, 1987; Clawson & Kram, 1984; Epstein, 1970; Ezell & Odewahn, 1980; Hunt & Michael, 1983; Keele, 1986; Kram, 1988; McKeen & Burke, 1989; Nieva & Gutek, 1981; Noe, 1988b; Ragins, 1989). Lack of adequate provision of functions that are provided within mentoring relationships, such as coaching, encouragement and guidance, is considered to be one of the reasons for the reduced chances of women to advance in the organisational hierarchy (Faver, Fox & Shannon,

1983; Jeruchim & Shapiro, 1992; Morrison, 1992; Morrison, White & Van Velsor, 1987a; Tharenou, 1997; Tharenou, *et al.*, 1994; York, Henley & Gamble, 1988).

A number of accounts for the alleged problems of women to be integrated into mentoring systems exist. A first explanation refers to demographic similarity which, as noted above, relates to the formation of relationships in the workplace (e.g., Tsui & O'Reilly, 1989). Gender is a very strong criterion for similarity judgements (Kanter, 1977). Research suggests that in the work environment individuals prefer to associate with colleagues of the same gender (Larwood & Blackmore, 1978). Therefore, women should have more problems in establishing relationships with individuals in the upper organisational levels because women are the minority in these levels.

A second account revolves around the management of developmental relationships by the individuals which participate in them. Clawson and Kram (1984) suggested that engagement in a developmental relationship in the work context involves the management of complexities which are internal and external to the relationship. The internal part of the relationship refers to the interaction between the individuals who form the relationship and the external part of the relationship relates to the interaction between the individuals involved in the relationship and the rest of the organisation (e.g., other organisational members in the context of the prevailing organisational culture). The management of the internal and external parts has inherent peculiarities in cross-gender relationships. Complexities of the internal part of cross-gender work relationships relate to three issues (Kram, 1983; 1985; Kram & Isabella, 1985): (1) the assumption of stereotypical roles in order to deal with the uncertainty and ambiguity inherent in cross-gender interpersonal interaction (Bunker & Seashore, 1977; Kanter, 1977). The assumption of traditional roles can seriously impair effectiveness; (2) inadequate role modelling (Heilman & Martell, 1986; Kram, 1983, 1985; 1988; Noe, 1988b; Shapiro, Hasentine, & Rowe, 1978). For instance, concerns about advancement and family life are traditionally different for men and women, and women consider the existence of a significant same-gender role model as a very important factors for their career success (Gaskill, 1991); (3) uncertainty and discomfort brought by the possibility of increase in intimacy and sexual attraction (Collins, 1983; Bowen, 1985; Kanter, 1977; Kram, 1983; 1988). This may lead either to a decision to withdraw from the relationship, or to a



decision to assume stereotypical roles (e.g., father/daughter) in order to eliminate the possibilities for sexual involvement (Kram, 1988). The external part of cross-gender developmental relationships has two types of complexities (Kram, 1988): (1) cross-gender relationships, rare as they are, are subject to public scrutiny and they may be seen with suspicion. If the external image of the relationship is not properly managed the reputation of the individuals involved in it may be seriously impaired (Collins, 1983; Bowen, 1985; Kanter, 1977; Kram, 1983). Hence, the management of the public image of the relationship may assume priority leading to the overlooking of important developmental functions (Fitt & Newton, 1981; Keele, 1986; Kram, 1983; 1988); (2) because a cross-gender relationship stands out, the female protégé may be resented and envied by her male and female colleagues. This may lead to situations where some women decide to restrain from a valuable relationship with a male superior in order to maintain positive relationships with or to avoid isolation from male peers and/or to maintain their female-composed networks (Ibarra, 1993; Kram, 1988). Although isolation from peers is one of the potential dangers for the protégé in same-gender mentoring relationships (e.g., Fagenson, 1994) it is a greater danger in cross-gender mentoring relationships. There is no direct empirical research to test these suggestions. Nevertheless, Fitt and Newton (1981) found that male mentors who had female protégés commented with regret on the high visibility of the relationship and the additional difficulties encountered in cross-gender relationships.

A third account, adopting another point of view, refers to the suggestion that mentors are reluctant to accept women as protégés because of the, erroneous, general belief that women lack commitment and motivation (Kram, 1988; Nieva & Gutek, 1981). Cannings and Montmarquette's (1991) findings provide some support for this suggestion. They found that women reported significantly less encouragement for advancement by their supervisors than their male counterparts despite the fact that there was very little difference in the proportions of men and women who reported having immediate superiors of the opposite gender (Cannings & Montmarquette, 1991).

The suggestions presented so far aim at explaining why women receive less mentoring. It has been suggested, however, that even when there are no gender differences in the quantity of received mentoring there are differences in the quality of

mentoring that is received (Fitt & Newton, 1981; Kram, 1988; Noe, 1988b; Ragins & McFarlin, 1990). To illustrate with an example, because, allegedly, there is less attraction and appreciation in cross-gender work relationships, a woman protégé of a male mentor may be less likely to be involved in the mentor's network of relationships (Ibarra, 1993). Goh (1991) found that female MBA students considered that male superiors provided mentoring functions to their female subordinates to a less extent than to their male subordinates. Therefore, not only should gender differences in reported mentoring be investigated, but gender differences in the strength of the relationship between reception of mentoring and indices of career success should be also investigated.

A fourth account argues that women tend to rely on formal procedures for advancement, such as hard work and talent, and they tend to ignore the existence of informal procedures (Cannings & Montmarquette, 1991; Hennig & Jardim, 1977; Nieva & Gutek, 1981). Mentoring, along with networking, partly involves the exploitation of such informal procedures. According to this line, barriers in the formation of the relationship is not the reason that women form fewer and less intensive mentoring relationships. The reason is that women do not pursue the formation of such relationships because they do not recognise their instrumental value for their career development.

Before progressing to the review of empirical findings on gender differences in mentoring, it is stressed that the above suggestions and findings are contingent upon the traditional consideration and study of mentoring, and career-related phenomena in general, in organisations consisting of male dominated hierarchies. Mentoring involves the establishment of a close relationship with a more senior organisational member. In male dominated organisations, there tend to be few women in upper organisational levels. This shortage of potential female mentors creates the necessity for most women to establish cross-gender mentoring relationships (Ezell & Odewahn, 1980; Ibarra, 1993; Ragins & Cotton, 1991). Studies do indicate that women and men in male dominated organisations or industries tend to have male superiors (Burke & McKeen, 1995; Noe, 1988b; Schneer & Reitman, 1994). In organisations, or parts of organisations, in which there is a numerical and power balance between genders, the situation may be different.

There is a considerable amount of research on gender differences in reception of mentoring. The results, however, are equivocal and they challenge the assumption that women receive less mentoring or face more barriers to mentors than men.

### *Empirical Findings on Gender Differences in Mentoring*

Research suggests that women do perceive more difficulties in finding mentors and in receiving mentoring (Ragins & Cotton, 1991; Woodall, *et al.*, 1995). There is also some support for the suggestions that women have less opportunities to find mentors and receive less mentoring. Koberg, *et al.* (1994) found men to report significantly more reception of mentoring than women in their sample of professionals (e.g., nurses) in a US general hospital. Finally, Ragins and Scandura (1994) found that women executives were more likely to have women protégés than men were. These findings support the suggestion that women employees attempt to initiate mentoring relationships with, alas scarce, women mentors and they receive less mentoring.

There is a considerable number of studies, however, which report no differences between men and women in reception of mentoring, including its quality, and its outcomes. Regarding reception of mentoring in general, research has reported no gender differences in perceived accessibility to mentors (Cox & Nkomo, 1991); currently having a mentor (Corzine, *et al.*, 1994; Fagenson, 1988; 1989); and attempts to initiate a relationship with a mentor (Turban & Dougherty, 1994). Scandura and Ragins (1993) found no relationship between gender and any of the mentoring functions in a sample consisting of US accountants, most of whom, regardless of gender, reported having male mentors. Burke & McKeen (1995) compared views of women who had female mentors with views of women who had male mentors and they found no significant differences between the two groups in concerns about and perceived difficulties in managing the public image of the relationship. This is in line with the results yielded by Tharenou, *et al.* (1994) who found that Australian women managers reported more career encouragement by their superiors than men did. Furthermore, they found no relationship between the degree of male-dominance of the organisational hierarchy and the extent of career encouragement reported by men and women (Tharenou, *et al.*, 1994).

Regarding the quality of mentoring and the effects of mentoring on work and career-related outcomes, research findings tend to be negative in terms of identifying gender differences. No gender difference in factors associated with the quality of received mentoring (e.g., psychosocial and career mentoring, protection/helpfulness and power of the mentors) have been found in a number of investigations (Burke & McKeen, 1995; Dreher & Ash, 1990; Fagenson, 1989; Turban & Dougherty, 1994). Fagenson (1988) found no interaction between gender and having a mentor on three variables which indicate perceived power in the organisation (e.g., perceived access to important individuals). A number of studies have found no interaction effects between mentoring and gender on indices of career success (e.g., number of recent promotions, perceived career opportunity) (Corzine, *et al.*, 1994; Dreher & Ash, 1990; Fagenson, 1989). Tsui and O'Reilly (1989), in an investigation which was conducted in a number of male-dominated organisations, reported findings which are in line with the above findings. Although they found that women subordinates with women superiors had the highest "liking" (e.g., appreciation, positive feelings) ratings by their superiors and reported the lowest level of role ambiguity, no significant difference in superiors' liking between men and women subordinates who had men superiors in any of these variables was found (Tsui & O'Reilly, 1989). The implication is that although having a female mentor may be an advantage for a woman, having a male mentor is not a disadvantage.

Regarding mentor preference, most research suggests that either potential protégés do not have specific preferences regarding the gender of their mentor (Alleman, Newman, Huggins & Carr, 1986; Olian, *et al.*, 1988), or that protégés, regardless of gender, have a preference for male mentors (Olian, Giannantonio & Carroll, 1986). Burke & McKeen (1995) found that although women who had men mentors perceived that having women mentors would involve a more easygoing relationship, yet women protégés with women mentors did not share this view. From the mentor's point of view, Olian, *et al.* (1993) found that potential mentors did not have any same-gender preference for protégés. In fact, their results pointed at a form of interaction. Mentors tended to have a preference for protégés of the opposite gender (Olian, *et al.*, 1993).

In light of the equivocal results in the relationship between gender and mentoring, it has been suggested that the consideration about a relationship between mentoring and

gender may be oversimplistic (e.g., Ragins & McFarlin, 1990). It may not be gender *per se*, but gender role orientation, a characteristic which is related to personality traits, which influences the development and functioning of mentoring relationships (Ragins & McFarlin, 1990; Scandura & Ragins, 1993). This suggestion points to a relationship between personality and mentoring.

The considerations about the alleged additional problems encountered by women in mentoring relationships may be the result of relatively early considerations of and research on mentoring as exclusively related to managerial hierarchies. Most management hierarchies were and still are male dominated. As seen, however, mentoring is a phenomenon which is present in any type of job, occupation or function, and in all organisational levels. Therefore, the alleged problems in the reception of mentoring that women encounter in male dominated hierarchies may equally apply to men working in female dominated organisational hierarchies, however scarce such hierarchies may be. In support of this suggestion, Tsui and O'Reilly (1989) found that, in male-dominated organisational hierarchies, men subordinates with women superiors reported the highest levels of role ambiguity amongst subordinates in all types of dyads (i.e., women subordinates with male supervisors or same gender dyads).

Having presented the literature on mentoring, including its relationship with career success, gender, structural and human capital characteristics the corresponding literature on networking is reviewed in the following sections.

## 4.2 NETWORKING

### 4.2.1 DEFINITION OF NETWORKING

Mitchell (1969, p. 2) defines a social network as “a specific set of linkages among a defined set of persons, with the additional property that the characteristics of these linkages as a whole may be used to interpret the social behaviour of the persons involved”. Within a social network there is a flow of qualities such as information, influence and emotion (Kanter, 1977; Tichy, 1981; White, Boorman & Breiger, 1967). All work organisations consist of multiple networks (Tichy, 1980; White, *et al.*, 1967)

and Pfeffer (1982) describes organisations as “relational networks”. Combining the above points, networking in the work environment can be defined as the number and strength of a working individual’s linkages with other individuals or groups in one’s work context (e.g., work organisation, occupation, profession), linkages which depend on the exchange of information, power and socioemotional functions .

Social exchange theory (e.g., Ekeh, 1974) offers an account for the formation of networks. According to this theory, individuals form and maintain relationships on the basis of the costs and rewards involved in participation in a certain type of relationship. Hence, in the organisational environment, network formation and maintenance are based on the exchange of rewarding behaviours among organisational members (Tichy, 1981). Therefore, participation in organisational networks, as the formation of and involvement in mentoring relationships, satisfies certain needs for the individual.

In organisational network analysis there is a distinction between inter-organisational and intra-organisational networking and networks (Adams, 1980; Lincoln, 1982). The former refers to the number and strength of an individual’s linkages with individuals in other work organisations. The latter refers to the number and strength of an individual’s linkages with others within one’s work organisation. Those other individuals can be superiors, colleagues or subordinates, in the same or different departments or divisions. Inter-organisational networking can be important for career success within a particular organisation. This should be limited, however, to cases where the individual occupies high level positions (e.g., executives), and, especially, in commercial organisations. Therefore, if networking contributes to career success in a single organisation, it is in the form of intra-organisational networking.

Another distinction that is made is that between formal, or prescribed, and informal, or emergent, networks (Ibarra, 1993; Tichy, 1981). Prescribed networks can be inferred from the organisational chart. They are composed of specified interactions among individuals or groups (e.g., departments), interactions that are considered necessary to achieve the tasks and objectives important for the functioning of the organisation (Ibarra, 1993; Monge & Eisenberg, 1987; Tichy, 1981). Emergent networks refer to relationships with others in the organisation which are not imposed by one’s formal work roles. The content of such relationships can be social, work related, or

include qualities of both. Coalitions (Thibaut & Kelley, 1959) and cliques (Tichy, 1973) constitute examples of emergent organisational networks (Tichy, 1981). Emergent networks also include prescribed relationships, but the interactions they describe are more extensive than those of prescribed networks (Ibarra, 1993; Tichy & Fombrun, 1979). Therefore, when the relationship between variables such as career success and networking is investigated emergent networking and networks must be considered.

### *Instrumental and Expressive Networking*

Network relationships in the work place include instrumental and expressive (Fombrun, 1982). Instrumental networking relationships are limited to work role performance and career development functions and they revolve around the exchange of information relevant to matters such as work expertise, career guidance, and exposure and visibility to upper management (Fombrun, 1982; Kram, 1988; Kotter, 1982; Tichy, *et al.*, 1974; Thomas, 1990). Expressive network relationships are distinguished from purely instrumental relationships because they revolve around mutual trust and involve various degrees of friendship ties. The primary commodity which flows through expressive networks is emotion rather than information (Ibarra, 1993; Krackhardt, 1992). The differentiation between instrumental and expressive networking has similarities with the differentiation between the career enhancement and psychosocial functions of mentoring. In the case of networking, however, one's instrumental and expressive networks largely consist of different individuals or groups of individuals, though, obviously, there is overlap. In contrast, in the case of primary mentoring both types of mentoring functions are provided by the same person.

Therefore, networking relationships of a focal individual in a work organisation can be conceptualised as forming a continuum. Exclusively expressive networking relationships are located on the one end and exclusively instrumental networking relationships are located on the other end of the continuum. Networking relationships with varying degrees of expressiveness and instrumentality fall in-between. Then, any relationship tie of the focal individual with other individuals or groups within one's work organisation, including a mentor, falls at some point on the instrumentality-expressiveness continuum.

### *Peer Relationships*

Kram (1983; 1988) found that a number of protégés in mentoring relationships mentioned the importance of relationships with colleagues when the mentoring relationship was at a transition stage or when it failed to provide the necessary functions. According to Kram and Isabella (1985) relationships with peers can function as a substitute or alternative for the mentoring relationship. Careerwise, or from an instrumentality point of view, peer relationships can provide functions related to information sharing, career strategising and job-related feedback. In the socio-emotional or expressive domain, peer relationships can provide confirmation, emotional support, feedback and friendship (Chao, *et al.*, 1992; Kram, 1988; Kram & Isabella, 1985). Gaskill (1991) found that women managers perceived support from colleagues to be an important contributing factor to objective career success. There are differences among peer relationships, however, with respect to the degrees of expressiveness and instrumentality that are inherent in them. Kram and Isabella (1985) identified three types of peer relationships according to the sets of functions they provide:

(a) Information peer relationships, which revolve around information exchange regarding work and the organisation for mutual benefit. There is very little or no socio-emotional confirmation and support and the levels of trust and self-disclosure are usually minimal (Kram, 1988). This type of relationship is very common and many individuals tend to form and maintain large numbers of relationships of this kind in the organisational environment (Kram, 1988; Kram & Isabella, 1985). Relationships with information peers can be considered as falling somewhere near the instrumental end of the networking continuum.

(b) Collegial peer relationships, which involve more intimacy than those among information peers. Primary functions provided in such relationships are career strategising, job-related feedback and friendship. Information sharing is also one of the important aspects of this type of relationship though is not as pivotal as in the case of relationships with information peers. An individual may have a small number of relationships of this kind, usually with individuals in the same department. Proximity increases the likelihood for close relationships to develop (Allen, 1977; Byrne, 1961;



Festinger, Schachter & Back, 1950; Kipnis, 1957). Relationships with collegial peers fall somewhere around the middle of the networking continuum.

(c) Special peer relationships, which are characterised by self-disclosure and self-expression and they represent the most intimate form of peer relationships. A relationship with a special peer provides a wide range of career development and psycho-social functions. An individual may have a very small number or even no relationships of this kind. Special peer relationships fall near the expressive end of the networking continuum and they should be seen as part of one's expressive network.

Mutuality is the major dynamic in peer relationships whilst, as already noted, the major dynamic in mentoring relationships is complementarity (Kram, 1983; 1988; Kram & Isabella, 1985). A peer relationship can move along the instrumentality-expressiveness continuum (e.g., starting as an information peer relationship and eventually developing into a special peer relationship) (Kram, 1988; Kram & Isabella, 1985). Factors which can affect the track of the relationship on the continuum relate to the characteristics of the individual and the organisation (Kram, 1988).

#### *Peer relationships in the context of networking*

Peer relationships can be seen in the framework of emergent networking or in the framework of mentoring. Nykodym, *et al.* (1995) suggested the latter whilst Whitely, *et al.* (1991) suggested that peer relationships fall into the framework of secondary mentoring. It is appropriate, however, to consider peer relationships in the context of networking for the following reasons:

(a) The first reason refers to the definition of mentoring in its classical or primary form. Adoption of the definition of primary mentoring as a working definition makes the measurement of reception and provision of mentoring more reliable and valid. A number of scales developed to assess reception of mentoring have been based on the consideration of mentoring in its primary form (e.g., Dreher & Ash, 1990). According to the primary view of mentoring, the mentor is a more senior and experienced organisational member than the protégé, the relationship is of relatively long duration, and provides a wide range of career-related and psycho-social functions (e.g., Kram, 1983; 1988; Levinson, *et al.*, 1978). Secondary mentoring refers to numerous and less

intense relationships which provide only some, mainly career-related, mentoring functions (Phillips-Jones, 1982; Whitely, *et al.*, 1991). Aryee and Chay's (1994) results provide support for the consideration that to obtain a full indication of the mentoring phenomenon mentoring must be considered in its primary form. They found that career-oriented mentoring functions considered alone accounted for a significant, yet small amount of variance in organisational commitment and career satisfaction.

(b) Another reason for considering peer relationships in the context of networking is that a major function of peer relationships is information sharing (Kram & Isabella, 1985). In most cases, peer relationships (e.g., "information peers", which is the most common type) provide only career enhancement functions, that is instrumental and not psychosocial functions (Kram, 1988; Kram & Isabella, 1985). Instrumentality and information exchange is also a central function provided by participation in emergent organisational networks (Ibarra, 1993; Keele, 1986; Tichy & Fombrun, 1979). Kram (1988) recommends participation in organisational networks for the acquisition of information peers and collegial peers. Finally, Kram (1983) concluded that the career-related, that is instrumentality, functions emerge first in the mentoring relationship. The psycho-social functions emerge later and only if the relationship becomes a full-blown mentoring relationship, that is a mentoring relationship in its primary form.

It appears, therefore, that the majority of peer relationships, network ties and secondary mentoring relationships can be considered as primarily instrumental in nature and they should be clearly distinguished from primary mentoring relationships. On the other hand, very close relationships with peers (e.g., special peers) tend to provide predominantly psychosocial functions (Chao, *et al.*, 1992). As already noted, by definition, primary mentoring relationships involve both instrumental and expressive (i.e., socio-emotional) functions (e.g., Kram, 1988; Thomas, 1990).

(c) A third reason to consider peer relationships in the context of networking is that peer relationships involve a two-way exchange dynamic whilst primary mentoring relationships are predominantly one-way helping relationships (Kram & Isabella, 1985). As noted, the special attribute of peer relationships is mutuality whilst that of mentoring relationships is complementarity (Kram, 1988; Kram & Isabella, 1985). Furthermore, on the basis of the literature on mentoring (e.g., Kram, 1988; Zey, 1984), it can be

concluded that there are clear power differences between the individuals involved in primary mentoring relationships. This is not the case in peer relationships which are usually based on mutuality and equitability.

As a final point, Kram and Isabella (1985) “double-check(ed)” that peer relationships (even the “special peer” ones) were not conventional mentoring relationships (Kram & Isabella, 1985, p. 115). They pointed out that mentoring and peer relationships have common characteristics, but their differences are both numerous and substantial to make them distinct (Kram & Isabella, 1985).

Therefore, under the framework of the networking literature, peer relationships can be described in terms of their degree of strength as interpersonal ties. Tie strength of an interpersonal relationship refers to its longevity, intensity, intimacy and reciprocity (e.g., Granovetter, 1973; Marsden, 1990). Information peers can be considered as linked with weak ties, collegial peers as linked with immediate strength ties and special peers as linked with strong ties. Information, collegial and special peers constitute parts of different networks which may be partly overlapping.

#### *Networking and content of network in relation to career stage*

There are suggestions that to optimise the effectiveness of networking the content of one's networks should change as a function of the career stage. Relationships with subordinates, peers and superiors have different subjective and functional importance as advancement in one's career is made because different life and career stages are associated with different needs and concerns about the self, the career and out-of-work relationships (e.g., Hall, 1976; Schein, 1978; Levinson, *et al.*, 1978; Super, 1957).

Individuals who are novice in the organisation usually need the provision of qualities such as guidance, support, role modelling, exposure and visibility. Such functions can only be provided by more senior individuals in the organisation. This is by no means a suggestion that relationships with peers are not important. In the career establishment stage, collegial and special peers can provide critical psychosocial functions; furthermore, collegial peers can help in career strategising, and information peers can serve as valuable sources of information (Kram, 1988; Kram & Isabella, 1985). However, some of the critical career enhancement functions, such as exposure and role

modelling, cannot be provided easily by relationships with peers at this stage (Kram, 1988).

Relationships with peers and subordinates become increasingly important as the individual advances in the organisational hierarchy. The reasoning has been provided by Kram (1988) in her account of the role that career stages play in the development of mentoring relationships and was presented earlier. Once a certain level in the organisational hierarchy has been reached, relationships with collegial and, especially, special peers can become a source of important information about what happens in the organisation, an important source of empathy and emotional support, and a source of provision of able subordinates (potential protégés), collegial and information peers.

#### 4.2.2 THE EFFECTS OF *NETWORKING ON CAREER SUCCESS*

Authors have suggested the importance of networking for career success in the organisational environment (Aldrich, 1989; Amatea, 1991; Brass, 1985; Burns & Stalker, 1961; Burt, 1982; 1992; Cannings, 1988; Cannings & Montmarquette, 1991; Collins, 1983; Dalton, 1959; Davidson & Cooper, 1992; DiTomaso, Thompson, & Blake, 1988; Gould & Penley, 1984; Grannovetter, 1974; 1982; Kram & Isabella, 1985; Landau & Hammer, 1986; Lincoln & Miller, 1979; Morrison & Von Glinow, 1990; O'Leary & Ickovics, 1992; Woodall, *et al.*, 1995; Zanzi, *et al.*, 1991). Woodall, *et al.* (1995) concluded that, in times of organisational change and restructuring, formal career development procedures are insignificant for career progression in comparison to membership into emergent organisational networks.

Zanzi, *et al.* (1991) found career concerns (e.g., gaining status in the organisation) to account for 25% of the variance in a self-report measure of use of networking tactics. Luthans, *et al.* (1985) used participant observation and they compared managers who were successful in their careers in objective terms (advancing fast in the corporate hierarchy) with their unsuccessful counterparts (having low promotion rates). They found that the rapidly advancing managers were engaging in networking-related activities for considerably more time than the slowly advancing managers. These networking-related activities included: conflict management (e.g., appealing to higher level individuals to

resolve disputes); socialising/politicking (e.g., “nonwork-related chit chat”, “informal joking around”, “discussing rumours”, “politicking”); and interacting with others (e.g., “public relations”). Furthermore, the successful managers devoted considerably less time than their less successful counterparts in activities that should be expected to enhance advancement in the corporate hierarchy, like planning/co-ordinating (e.g., “setting goals and objectives”, “assigning tasks and providing routine instructions”) and monitoring or controlling performance (e.g., “walking around checking things out”, “preventive maintenance”). Finally, “socialising/politicking” and “interaction with others” were the only types of behaviours that were predictive of promotion rates (Luthans, *et al.*, 1985). The implication is that building informal networks may be the most, if not the only, effective way to advance one’s organisational career. In a similar line, Cannings and Montmarquette (1991) suggested that building a network can serve as a substitute for promotion bids and as a means for circumventing normal meritocratic procedures in gaining promotions. Herriot, *et al.* (1993) tried to provide an explanation for the alleged positive effects of early career mobility on later success (e.g., Rosenbaum, 1979). They concluded that early career mobility (e.g., inter-departmental moves) contributes to later success by providing the opportunity to build effective networks. Sheridan, *et al.* (1990) argued that corporate sponsorship exerts its positive effects on the careers of graduate trainees by providing opportunities for socialisation and network building. Finally, Roberts and O’Reilly (1979), in a more dramatic tone, suggested that failure to integrate into informational organisational networks can have dysfunctional effects on one’s career.

#### *Empirical Findings on the Relation between Networking and Career Success*

Direct empirical research in the relationship between networking and career success is, however, limited. In fact, some of the relevant findings have been reported as part of investigations of other issues (e.g., Chao, *et al.*, 1992). Nevertheless, the findings do confirm the abundant suggestion that networking is related to career success.

Cannings and Montmarquette (1991), studying a large Canadian organisation, found that networking among men in middle management could counterbalance poor performance evaluations by supervisors in promotions. Gould and Penley (1984) found an association between networking and two indices of objective career success (salary

progression and plateauing). Finally, Chao, *et al.* (1992) reported a significant relationship between a variable labelled “politics” and salary levels. “Politics” referred to the extent to which the individual perceived as important having access to information regarding formal and informal organisational facts and organisational power structures (Chao, *et al.*, 1992). Reviewing the few studies which directly investigated the relationship between networking and managerial career advancement, Tharenou (1997, p. 82) concluded that networking facilitates entering and advancement in management, with bigger networks being better

Brass (1985) found that being promoted was significantly correlated with both supervisors’ and nonsupervisors’ ratings of an individual’s influence in the organisation which, in turn, were related to measures of the individual’s networking. Importantly, simple contact with other individuals in the organisation with whom the individual had to interact to perform normal work functions (i.e., participation in formal networks) was related neither to ratings of influence nor to being promoted (Brass, 1985). Krackhardt (1990) reported a complementary finding. He found that formal position in the organisation was not related to accurate perceptions about network ties in the organisation. Therefore, it is mainly participation in emergent networks and not in prescribed networks, which relates to career success in a single organisation.

Studies on the relationship between networking and subjective career success are even rarer. Peluchette (1993), however, found a positive association between scores on a short measure of networking and subjective career success.

### *Mechanisms for the Effects of Networking on Career Success*

Various suggestions about the ways in which networking influences objective career success have been provided. One line of consideration is that participation in networks is related to one’s influence and power (Allen & Porter, 1983; Blau & Alba, 1982; Brass, 1984; 1992; Fombrum, 1983; Hubbell, 1965; Mechanic, 1962; Pfeffer, 1981). Power in the organisational environment is a function of access to and control of information, other individuals and instrumentalities (Albrecht, 1983; Mechanic, 1962; Pfeffer, 1981). Brass (1985) found that the amount of informal interaction with the upper level management in a publishing company was associated with independent ratings of

individuals' organisational influence. In a similar vein, Gould and Penley (1984) suggested that networking can result in what Schein (1978) called "radial mobility": moving closer to the individual decision making structure of the organisation. Importantly, research suggests that not only is participation and centrality in organisational networks related to power, but also accurate perceptions of networks, especially emergent networks, is a good predictor of one's power in the organisation (Krackhardt, 1990). The implication is that having an understanding of the existence and operations of networks may be as important as participation in such networks.

Another line of thought suggests that networking relationships can enhance career prospects by providing access to information concerning the organisation and opportunities for advancement (Kram & Isabella, 1985; Woodall, *et al.*, 1995).

Finally, it is suggested that networking increases visibility to organisational members in higher ranks, which serves as a signal (Cannings, 1988; Cannings & Montmarquette, 1991; Rosenbaum, 1979; Woodall, *et al.*, 1995). Signalling theory (Spence, 1973) and the mechanisms by which signals may affect decisions regarding the allocation of organisational rewards have been presented earlier. The complete picture should incorporate elements from all the above accounts.

Although no direct accounts for the effects of networking on subjective career success are found in the literature, two mechanisms can be suggested. First, having extensive networks, especially, networks which provide socio-emotional functions, can fulfil needs for confirmation, friendship and support. Fulfilment of such needs has been reported as the major benefit from relationships with peers (Kram & Isabella, 1985). Furthermore, participation in emergent organisational networks may enhance one's perceptions about one's power and influence in the organisation, and, in turn, his or her perceptions regarding prospects for career advancement, a major contributor to subjective career success (e.g., Gattiker & Larwood, 1988). Second, networking may also affect subjective career success through its effects on objective career success. Research suggests that subjective career success is affected by objective career success (e.g., Turban & Dougherty, 1994). These accounts are complementary and suggest that networking affects subjective career success directly and indirectly.

After having reviewed the literature on the relationship between networking and career success, including the mechanisms which underlie the relationship, the relationship of networking with structural factors and individual (e.g., human capital) variables are considered in the following sections.

#### 4.2.3 NETWORKING AND STRUCTURAL CHARACTERISTICS

As in the case of mentoring, characteristics of the organisation should be expected to facilitate or inhibit the formation of inter-personal networks (Deal & Kennedy, 1982; Krackhardt, 1990; Tichy, 1981; Woodall, *et al.*, 1995; Zanzi, *et al.*, 1991). Organic organisational structures (Burns & Stalker, 1961) favour the building of intra-organisational networks because they foster variability of behaviour, quantity of interaction, equality of interaction and interconnection between individuals or groups (Tichy, 1981; Tichy & Fombrun, 1979; Zanzi, *et al.*, 1991). Zanzi, *et al.* (1991) concluded that their results suggested that the type of organisational structure moderates the relationship between career concerns (e.g., advancement in the organisational hierarchy) and use of networking as a political tactic. The relationship between career concerns and networking becomes prominent and strong in organisations which adopt organic structures (Zanzi, *et al.*, 1991).

Other organisational characteristics which are associated with facilitation or inhibition of networking activities, and their relationships to career outcomes, include promotion procedures, reward structure, task design and human resource practices. Organisational features can directly (e.g., reward system, task design, structure) or indirectly (e.g., personnel development policies) support or necessitate the formation of relationships with other organisational members (Kram, 1988; Pfeffer, 1981; Woodall, *et al.*, 1995). Therefore, as in the case of mentoring, structural characteristics can affect the extensiveness and composition of networks and can confound the relationship between networking and career outcomes in the organisational environment.



#### 4.2.4 NETWORKING AND HUMAN CAPITAL

Although direct empirical research is difficult to find, it is reasonable to assume that human capital attributes affect networking in a work organisation. Demographic similarity is related to the frequency of communication and the likelihood of friendship ties' formation (e.g., O'Reilly, *et al.*, 1989). For instance, Cotton (1994) notes that informal groups, hence networks, in the work environment are unlikely to include members from different classes of social origin.

Furthermore, as seen earlier, there are suggestions and some evidence that human capital variables relate to mentoring (e.g., Olian, *et al.*, 1993; Whitely, *et al.*, 1991). Because, as also seen, networking and mentoring are assumed to be related (e.g., Kram & Isabella, 1985) it is reasonable to expect that the same types of human capital attributes relate to networking.

#### 4.2.5 GENDER AND NETWORKING

It has been suggested that women tend not to participate in emergent organisational networks (Cannings & Montmarquette, 1991; Marshall, 1984; Coe, 1992). Woodall, *et al.* (1995), in a British study, found that women reported greater difficulty in accessing emergent organisational networks.

A number of complementary explanations have been suggested for this alleged phenomenon. The first revolves around the suggestion that the ability to perceive social systems (e.g., the work organisation) accurately is related to the length of participation and one's centrality in these social systems (Freeman, Freeman & Michaelson, 1988; Freeman & Romney, 1987; Freeman, Romney, & Freeman, 1987). Because women are relatively new in the organisational environment, they may not be fully aware of the existence of informal networks and their importance. There is support for this suggestion. Reif, Newstrom and Monczka (1975) have provided evidence that women are not as adept as men in differentiating formal from informal organisational structures. Gaskill (1991) found that women managers perceived knowing "the right people" to be the least important factor for their career advancement; even when women referred to networking

as a tool for career advancement, they referred to formally organised women's networks (Gaskill, 1991).

A second suggestion, which is similar to the above, for the under-representation of women in informal networks is that women tend to rely more on formal procedures (e.g., hard work, qualifications) for advancement and they tend to put less consideration on informal procedures, such as mentoring and networking (Cannings & Montmarquette, 1991; Hennig & Jardim, 1977; Melamed, 1995a; Nieva & Gutek, 1981). In fact, research indicates that concerns about the development of personal competencies and work relevant skills are negatively related to the use of networking and mentoring as political tactics in the organisational environment (Zanzi, *et al.*, 1991). Gould and Penley (1984) found male employees to report using more networking than women as a career enhancing strategy. Finally, there are studies that provide evidence that women show less ability in using their human capital assets and formal position to gain access to emergent organisational networks (Ibarra, 1992; Miller, Lincoln & Olson, 1981).

A third line of thought regarding the lower participation of women into informal organisational networks draws upon interpersonal attraction theory, which suggests that individuals prefer to associate with others who perceive to be similar to themselves (Alderfer, 1987; Kaplan, 1984; Lincoln & Miller, 1979; Tsui & O'Reilly, 1989). Lincoln and Miller (1979) provided empirical evidence that network relationships are strongly affected by gender and Kanter (1977) found that male managers reported feeling uncomfortable communicating with women. Organisational network theorists refer to the degree of similarity between interacting organisational members as "homophily" (Marsden, 1988). High degree of homophily in one's network of relationships reduces access to information and instrumentalities (Aldrich, 1989; Granovetter, 1973; 1982). Women would tend to form network relationships with other women, that is women's networks are of a high degree of homophily, hence, their access to important information and instrumentalities is limited. In addition, women would also have limited opportunities to establish relationships with individuals who occupy powerful positions in the organisation (Ibarra, 1993) because they are traditionally under-represented in the upper levels of organisations and in the most powerful organisational functions (e.g. finance) (e.g., Alderfer, 1987; Morrison & Von Glinow, 1990). Hence, again, the

instrumentality of women's networks is reduced. Research does suggest the existence of and tendencies towards formation of segregated, men's and women's networks in the organisational environment (Brass, 1985; Coe, 1992; Drory & Beaty, 1991).

As a fourth account for the lower participation in and utilisation of emergent organisational networks by women, some authors have suggested that women are deliberately excluded from informal organisational networks by men. Men, being the dominant coalition in most organisations, wish to maintain this dominance and they intentionally exclude women from informal interactions (Marshall, 1984; Melamed, 1995b). Furthermore, ties with women may be considered of less value than ties with men, even when formal status is the same (Ibarra, 1993) because gender is associated with perceptions of competence, status and power (Ridgeway, 1991). There are suggestions that low ascribed status (e.g., being a woman) can counterbalance the effects of occupying a position of high power in the organisation (O'Leary & Ickovics, 1992; Ragins & Sundstrom, 1989). Attractiveness of an individual as a potential tie is related to perceived current competence and future potential (Kaplan, 1984). Therefore, regardless of their position in the organisational chart, women may be valued less as potential ties. There is also research which implies support for this view. Ibarra (1992) found that although men's networks were characterised by very high homophily in terms of gender composition women's networks showed considerably lower gender homophily, women's instrumental networks consisting primarily of male ties.

The fifth explanation adopts a rather contrasting tone to the accounts presented so far, suggesting that women may consciously exclude themselves from interaction networks with men, even though they understand that participation in such networks can benefit their careers (Ibarra, 1993; Kram, 1988). This is because there are potential sanctions imposed by the in-group of women if they "betray their identity" and align themselves with the "men" (Kanter, 1977; Nieva & Gutek, 1981). Therefore, women prefer to show loyalty to their group consciously sacrificing some of their career potential. Drory and Beaty's (1991) results provide support for this view. They concluded that "the possibility that intra-gender identification and inter-gender conflict will become a major term in this struggle should call the attention of both researchers and practitioners in the organisational area" (Drory & Beaty, 1991, p. 257).

Finally, two more suggestions regarding women's emergent networks are worth mentioning. First, because women tend to experience more interruptions in their careers than men (Ragins & Sundstrom, 1989) their same-gender networks tend to be less stable than those of men (Ibarra, 1993). Second, even when women manage to escape the situation of strictly participating in same-gender networks and establish a considerable number of cross-gender relationships, they obtain less benefits from such relationships than their male counterparts (Ibarra, 1993). Indeed, research on work-related relationships suggests that cross-gender relationships tend to be characterised by weaker ties than same-gender relationships (e.g., South, Bonjean, Markham & Corder, 1982; Tsui & O'Reilly, 1989).

There is considerable empirical work which suggests that networking plays a considerably less important role in women's than in men's objective career success. This work also suggests that women's objective career success depends more on the use of formal procedures and qualifications than men's objective career success does. Cannings (1988), in a study in a single organisation, found that networking made a significant contribution to the objective career success of men, but not to that of their female counterparts. Furthermore, although performance evaluations made a significant contribution to the objective career success of both genders the size of the coefficient in the women's model had double the size of the corresponding coefficient in the men's model (Cannings, 1988). Similarly, Cannings and Montmarquette's (1991) data suggested a causal chain among education, performance, bids for promotion and number of promotions for women. On the other hand, a complete absence of any inter-relationship between these variables was found for men, suggesting that performance was much more important for women's promotions and that human capital such as education affected women's promotions through its effects in performance, but it may have affected men's promotions otherwise. Finally, complementing the previous finding, Melamed (1995a) found personality factors (i.e., Extraversion), which should be related to the likelihood to participate in organisational networks, to be related to men's, but not to women's objective career success (salary levels). On the contrary, job-relevant human capital (e.g., educational attainment, job experience) was related to women's, but not to men's objective career success. Finally, Tharenou (1997) in a brief review of the related

literature, concluded it is highly likely that emergent organisational networks help managerial men more than their female counterparts in their advancement.

Only Brass' (1985) study in a newspaper publishing company yielded results which contradict the findings presented above. Brass (1985) found no significant gender differences in seven out of the twelve indices of networking extensiveness among the employees. In three out of the five indices where significant differences were found, women scored higher than men. Extensiveness of networking, however, should be distinguished from network composition. It has been suggested in the mentoring literature that even when no gender differences in the quantity of received mentoring exist, women may receive mentoring of inferior quality (e.g., Noe, 1988b; Ragins & McFarlin, 1990); though, as seen, this suggestion does not seem to receive empirical support. In the case of networking, it could also be argued that women's networks, regardless of their extensiveness, do not include individuals who can provide them with access to instrumentalities (e.g., information, power structures) that are critical for career advancement. Furthermore, even if women have access to the necessary instrumentalities they may not be aware of their utility or they may not be willing to utilise them to advance their careers.

#### *4.2.6 THE ISSUE OF MALE-DOMINANCE*

The considerations that women are not incorporated into and do not benefit from emergent networks are based on the assumption that women find themselves in male-dominated organisations or occupations (e.g., Brass, 1985; Kanter, 1977; Morrison & Von Glinow, 1991). It is likely, therefore, that the patterns presented in the previous sections do not equally apply in organisations where the relative percentages of men and women in middle and high levels are comparable, because these patterns and considerations are contingent to the notion that organisational power is predominantly shared by men. Kanter (1977) considered that as women gain organisational positions of power their networking problems will be reduced. In fact, there is some support for this suggestion. Brass' (1985) study, which reference was made in the previous section, was conducted in an organisation where there was a balance in men's and women's numbers,

though the top-level in the organisation was still dominated by men. Concluding on the results of that study, Brass (1985) noted that “the view that women are not aware of, or do not develop, informal networks in the workplace” did not receive support. Rather, there were indications that women were more adept at building informal networks, especially with other women, than are men” (Brass, 1985, p. 339). Brass (1985), however, did find that, regardless of the employee's gender, one's centrality into men's network, but not to women's network, was related to perceived influence and to being promoted.

Therefore, as in the case of mentoring, an important issue for investigation is gender differences in the extensiveness of networking and on the effects of networking on career outcomes in organisations which do not appear to be male-dominated. To provide an illustration, part of the investigation in this issue can be to test whether men who work in female-dominated organisations report less extensive networking than their female counterparts. Some research has suggested that in low organisational ranks, where women are not under-represented, women are not at a disadvantage in terms of awareness of and participation in emergent networks (Kanter, 1977; Bartol, 1978; Brass, 1985). Furthermore, the patterns of relationships between networking and career success for men and women (e.g., relative importance of networking) in non-male dominated organisations warrants investigation. Melamed (1995b) has suggested that mentoring and networking may be important factors in the determination of gender differences in indices of objective career success, above the role played by human capital and structural factors. Although the effects of such processes (e.g., networking) on gender differences in objective career success have been documented to some extent (e.g., Cannings & Montmarquette, 1991) that “documentation” took place in organisations that were male-dominated.

Having considered the literature on networking, including its relationship with career success, structural factors, human capital and gender, the relationship between networking and mentoring is considered in the following sections.

### 4.3 THE RELATIONSHIP BETWEEN MENTORING AND NETWORKING

#### 4.3.1 *THE COMPLEMENTARITY OF MENTORING AND NETWORKING*

Kram (1988) makes use of the terms “level peer” and “age peer”. Level peers are individuals at the same organisational level and they can be of the same or considerably different ages. Relationships with level peers of the same age are likely to provide important socio-emotional functions along with career enhancing functions. Relationships with level peers of different age can provide some important career development functions, such as coaching. Age peers are individuals of similar age, but in different (higher or lower) organisational levels. Relationships with age peers can provide important career functions, such as information sharing and career strategising, along with psychosocial functions such as friendship (Kram, 1988). It is then evident that an individual’s organisational network consists mainly of age and level peers.

Therefore, given the fact that networking with peers can cover a variety of career related and socio-emotional functions, the suggestion is that a network of relationships can successfully replace a mentoring relationship. In fact, networking appears to have some advantages over a traditional relationship with a mentor. Networks are easier to develop because peers are more readily available than mentors. Reasons for this include the pyramid structure of most organisations and the easiness of relating with individuals of similar age or status (Kram, 1988). Furthermore, peer relationships, especially special peer relationships, can be more enduring than mentoring relationships, as they can last for up to one’s entire organisational career (Kram, 1988; Kram & Isabella, 1985). Mentoring relationships, apart from the fact that they are not always readily available (e.g., Kram, 1985; Kram & Isabella, 1985), may be difficult to replace when they end. In this case, as already mentioned, the ex-protégé can be left isolated, not able to enjoy the protection, the benefits, and the access to networks that the relationship with the mentor used to provide. Furthermore, the ex-protégé may have to face a hostile peer atmosphere due to the animosity or jealousy for the special treatment she or he used to enjoy (Fagenson, 1994; Kram, 1988; Noe, 1988a; Phillips-Jones, 1982). For this reason, Kram

(1988) notes that exclusive concentration of one's efforts on finding a mentor is an unwise use of personal energy and time.

On the other hand, however, relational networks have negative attributes as well. Feelings of competition among peers can interfere with the provision of career and psychosocial functions. Furthermore, relationships with peers may reinforce dysfunctional views about the self and the organisation. To illustrate, women in the low levels of male-dominated organisational hierarchies may mutually reinforce beliefs and feelings of helplessness regarding their prospects for career advancement (Kram, 1988). Finally, although a network of relationships can be a replacement for many of the mentoring functions, there are some functions, such as exposure-visibility and sponsorship, which cannot be easily provided by a such network. For instance, a relationship with a mentor may be the only way for an individual to be assigned a challenging, high-visibility task.

Therefore, both mentoring and networking are desirable because each can provide unique functions, and both should exist and be used in a balanced way. British employees themselves mention the importance of both mentoring and networking for survival in the organisation at times of organisational change and restructuring (Woodall, *et al.*, 1995). Zanzi, *et al.* (1991) factor-analysed a scale of use of political tactics and they found "use of mentor" and "use of networking" to load on the same factor. The factor loading of networking, however, was much stronger suggesting that organisational members associate building and exploiting networks with political behaviour more than mentoring. The implication is that individuals do distinguish between networking and mentoring in terms of the functions each can provide.

Two theoretical frameworks which provide theoretical support for the suggestion that mentoring and networking should be seen as complementary phenomena are the consideration of mentoring and networking as clusters of ties (e.g., Ibarra, 1992; 1993) and the notion of relationship constellation (e.g., Tichy, 1981).

According to some authors, mentoring and networking can be viewed in terms of strong and weak inter-personal ties, respectively (Ibarra, 1992; 1993; Keele, 1986). The suggestion is that both mentoring and networking are useful and effective because strong and weak ties provide different types of functions. Weak ties provide access to distant



information and instrumentalities which would otherwise be beyond reach (Granovetter, 1973). On the other hand, strong ties can provide qualities such as trust, support and guidance for evaluation of the information that is provided by the weak ties (Aldrich, 1989; Ibarra, 1993). A network which focuses on both strong (e.g., mentors, protégés, special peers) and weak ties (e.g., information peers) can be responsive to a greater variety of career and personal needs (Brass, 1992; Granovetter, 1982). Empirical work suggests that successful employees make use of the advantages that a combination of strong and weak clusters of ties offers. Kotter (1982) and Keele (1986) studied general managers and bankers, respectively. They found that their respondents reported having extensive networks consisting of a great number of weak-tie relationships and a very small number of strong-tie relationships, including mentoring relationships. According to Keele (1986), this pattern demonstrates the importance of having a large number of weak-tie relationships in addition to a small number of intensive and exclusive relationships.

The notion of relationship constellation refers to the range of relationships that support an individual's career development at any point in time (Kram, 1988; Tichy, 1981). The constellation can be constituted of relationships with superiors, peers, mentors, subordinates, or even friends and family members. External (e.g., organisational changes) or internal (e.g., the individual moves to a different career stage) factors may require the constellation to change. It is, therefore, recommended that individuals develop an appropriate relationship constellation which includes relationships that fall in a variety of types because this increases the probability that the necessary career and psychosocial functions will be provided in any career or work contingency (Ibarra, 1993; Kram, 1988). The suggestion is, therefore, that mentoring and networking must be considered and utilised together, as distinct, but allegedly related, phenomena.

#### *4.3.2 INTER-RELATEDNESS OF AND CAUSALITY BETWEEN MENTORING AND NETWORKING*

Empirical investigation of the relationship between mentoring and networking is scarce and indirect. Zanzi, *et al.*'s (1991) study on political tactics in the organisational environment showed that use of mentor and use of networking loaded in the same factor,

though with different strengths, suggesting a relationship, but distinctiveness at the same time, between the two phenomena. Chao, *et al.* (1992) found a significant relationship between reception of mentoring and the extent to which the individual considered that he or she had access to information regarding formal and informal organisational facts and organisational power structures. Chao, *et al.*'s (1992) finding can be interpreted as suggestive of a relationship between reception of mentoring and networking.

In the case that two variables are related, the issue of their causality order arises. Keele (1986) notes that one's ability to contribute in a strong-tie relationship (e.g., a mentoring relationship) is partly determined by one's quantity and quality of weak ties (e.g., extent of one's network). Ironically, according to Keele (1986), individuals with fewer weak ties, who most need strong ties, are likely to have less to offer in a strong tie relationship than individuals with extensive weak ties, hence they are less likely to participate in such relationships. Fagenson's (1988) study offers some support for this suggestion. She found that the respondents who indicated having mentors reported that they had more access to resources (e.g., information) which were valuable to individuals at higher levels of the organisation than the respondents who indicated not having mentors. Of course, as Fagenson (1988) herself acknowledged, identification of a relationship does not prove causality or the direction of causality desired by the researcher. Nevertheless, it can be suggested that the extensiveness and quality of one's network may affect the probability that the individual will receive mentoring.

It seems, however, that not only can the extensiveness of networking increase the likelihood for mentoring, but mentoring also has effects on one's networking as well. As already seen, one of the suggested mechanisms through which mentoring affects career advancement is by improving the protégé's networking (Aryee, *et al.*, 1996; DeFillipi & Arthur, 1994; Dreher & Ash, 1990; Dreher & Bretz, 1991; Van Maanen & Schein, 1977). Furthermore, the suggestion made by Keele (1986) in her credit theory of mentoring can be viewed from the inverse perspective. Individuals with no valuable strong ties (e.g., a mentor) should be seen as less valuable weak ties. Hence, it can be suggested that a relationship with a mentor increases the protégé's attractiveness as a potential tie, facilitating one's entrance into or improving one's organisational networks.

Therefore, there is adequate reasoning to support a causality relationship between mentoring and networking in both directions. The above reasoning, however, adopts an individual-level approach. It appears that structural factors must also be taken into account when this causality relationship is considered, especially factors that relate to work design and the organisational structure. To illustrate providing a simple case, in organisations which have implemented formal mentoring systems the relationship between mentoring and networking must be initiated from mentoring. The mentor is the person with whom the new member has the first important work related contacts and who will introduce the protégé to other organisational members either directly (e.g., as part of the socialisation process) or indirectly (e.g., through the assignment of tasks). In addition, the relationship with the mentor can make the protégé attractive to other individuals as a relationship tie. The same can be argued for organisations where no formal mentoring system exists, but the newcomer to the organisation or the department is assigned to a superior under whom she or he has to work and complete assignments. The cases where mentoring initiates the relationship with networking must constitute the majority. Cases where the relationship is initiated from networking must be considerably rarer. Sales organisations or sales departments where employees work independently and on commission and where no clear status distinctions exist between most of the employees may be considered as an example of the latter case. In these cases (e.g., sales persons working independently and on commission), however, it may not be intra-organisational networking, but it may be inter-organisational networking which mostly relates to career success. Nevertheless, the conclusion is that the organisational context must be taken into account when the direction of causality between mentoring and networking is considered.

Regarding the relationship between provision of mentoring and networking, it is more difficult to speculate on any relationship or causality pattern, given the lack of consideration in the literature. It is reasonable to suggest that an extensive network should also make it easier for an organisational member to meet potential protégés. It is also reasonable to assume that the more extensive one's network is the more likely it is for this individual to be approached by potential protégés. On the other hand, provision of mentoring functions for one or more protégés offers to the mentor access to the

protégé(s)' networks. Therefore, a positive relationship between provision of mentoring and networking is reasonable to assume, though this relationship should be weaker than the relationship between reception of mentoring and networking. Regarding any direction of causality it would be most logical to speculate that the relationship is initiated from networking because an individual must already have established some kind of network relationships when the opportunity to become a mentor arises. Provision of mentoring could enhance one's network, but the "loop" should be initiated from the point of networking.

As already noted, direct empirical research, especially quantitative research, on the relationship between mentoring and networking is extremely scarce. The only report is by Peluchette (1993) who found a moderately strong association between mentoring and networking for her sample of academics. However, Peluchette (1993) used a very short scale to measure networking with unreported reliability. There is no similar research on the relationship between provision of mentoring and networking.

Finally, it is evident that the boundaries between mentoring and networking are not clear. As noted, some authors tend to consider the mentor as part of one's network of relationships (Ibarra, 1993). On the other hand, networking can be examined under the framework of secondary mentoring (Whitely, *et al.*, 1991). Therefore, a clear distinction between the two concepts at the operationalisation level is a necessity for valid measurements and results to be received. This can be achieved, to a certain extent, by providing clear definitions (e.g., clearly distinguishing between primary and secondary mentoring and considering the latter, along with peer relationships, under the framework of networking).

## CHAPTER 5: PERSONALITY IN THE ORGANISATIONAL ENVIRONMENT

## CHAPTER 5. PERSONALITY IN THE ORGANISATIONAL ENVIRONMENT

Until recently, personality has been largely rejected as a valid means of prediction in organisational settings. This trend started in the 1960s after very influential reviews of empirical literature (Guion, 1965; Guion & Gottier, 1965) and continued in the next decades (e.g., Bernardin & Beatty, 1987). At a theoretical level, one of the major arguments against the usefulness of personality traits as predictors in organisational, and other, settings has been that situational factors are the main determinants of behaviour (e.g., Roberts, *et al.*, 1978). This argument has its roots in the relatively early "conclusion" that the cross-situational consistency of behaviour is low (Bem, 1972; Mischel, 1968; Peterson, 1968). A central concept in the situationists' argument is the "strength" of the situation (Mischel, 1977). The stronger the situation the more the pressure it exerts on the individual and the higher the probability that uniform behaviour will be exhibited; hence the less the likelihood that dispositions will exert effects on behaviour. The strength of the situation in the organisational environment is affected by factors such as job autonomy, organisational culture and individual roles (Schneider & Hough, 1995).

Trait theorists, however, do recognise the importance of the situation (e.g., Cattell, 1979; Nesselroade & Delhees, 1966; Moos, 1969). Their argument is that the concept of trait is important for understanding the consistency of behaviour whilst the consideration of the situation contributes to the explanation of the variability of behaviour (Pervin, 1993). Bell and Staw (1989) consider that most situations in the organisational environment are of intermediate strength, hence, there is considerable room for individual dispositions to exert their effects. Furthermore, even in strong situations the relationship between personality and behaviour can be of considerable strength (Monson, Hesley & Chernick, 1982). In fact, there are indications that strong situations can enhance or make evident the relationship between personality traits and behaviour (e.g., Maslach, Santee, & Wade, 1987; Maslach, Stapp & Santee, 1985; Schneider, 1987; Wright & Mischel, 1987). To illustrate, Barrick and Mount (1993) found that the relationship between Tough-Mindedness (agreeableness) and job

performance emerged as significant only when the moderating effects of the strength of the situation (operationalised as high and low job autonomy) were taken into account. In addition, the early severe criticisms of the trait approach (e.g., Mischel, 1968; Vernon, 1964) were mainly based on the early causal view of traits which conceptualised them as stable mental structures which determine behaviour over time and across situations (e.g., Hartshorne & May, 1928; Allport, 1937). Later conceptualisations of traits [e.g., act-frequency position (e.g., Hampshire, 1953); conditional view (e.g., Alston, 1975)] offer much less ground for criticism.

To complement the above points, research which follows the interactionist approach to personality (e.g., Magnusson & Ekehammar, 1978) suggests that categorisation of individuals in terms of dispositions is easier than categorisation of situations, with respect to efficiency of prediction of inter-individual differences in behaviour (e.g., Chaplin & Goldberg, 1984; Mischel & Peake, 1982). This suggests a dominance of the traits over the situation in terms of ability to account for behaviour.

Finally, research suggests that individuals who possess combinations of certain personality characteristics tend to follow careers in occupations which match these characteristics (Krauskopf & Saunders, 1995). The implication is that any uniformity in behaviour within occupations or organisations may not be caused by, or only by, the structural characteristics of the occupation or the organisation (i.e., the situation), but by personality which leads to specific career patterns for groups of individuals who show similarities in certain personality traits.

At an empirical level, there is work which suggests that there does exist a relationship between personality traits and behaviour (e.g., Fallahi, 1990; Thetford & Schucman, 1969; York, 1994). Furthermore, the usefulness of and validity in the use of personality specifically in organisational settings has been suggested by empirical and review work (e.g., Barrick & Mount, 1991; 1993; Barrick, Mount & Strauss, 1993; Day & Silverman, 1989; Gellatly, Paunonen, Meyer, Jackson, & Goffin, 1991; Hogan, 1991; Hough, 1989; Robertson & Kinder, 1993; Sackett, Burriss & Callahan, 1989; Tett, Jackson & Rothstein, 1991). The notion that behaviour and its outcomes in organisational settings, or in general, is influenced by a combination of personality traits and structural or situational variables and their interaction gains universal approval (Barrick & Mount,

1993; Chatman, 1989; Kenrick & Funder, 1988; O'Reilly & Chatman, 1994; Schneider, 1987; Wright & Mischel, 1987; 1988). Therefore, omitting personality traits from considerations of individual level organisational processes and outcomes (e.g., inter-personal process, work and career outcomes) leaves a substantial part of the picture incomplete.

Nevertheless, with regard to up-to-date use of personality in organisational research, Furnham (1992), along with some other authors, notes some important issues that must be taken into account. First, he notices a lack of consent among theorists concerning issues such as the nature, structure and processes involved in personality. Especially among trait theorists, lack of an adequate parsimonious taxonomy of trait-descriptive terms has been noted (Schneider & Hough, 1995). Furthermore, according to Furnham (1992), the use of personality variables in most organisational research has been made in a piecemeal, unconcerted, arbitrary, and convenience-based manner, described by Guion and Gottier (1965) as the "broadside approach". There has been a lack of theory, appropriate justification and rationale (Pfeffer & Ross, 1982; Weiss & Adler, 1984). This has led to a high proportion of insignificant results which have provided reasoning and support for the situationists (Kanfer, Ackerman, Murtha & Goff, 1995). Tharenou (1997, p. 81) concluded that "personality is inconsistently related to managerial career advancement ... but may be relatively important when conceptually linked".

The lack of consent about a trait taxonomy may be partly responsible for the "employment" of the "broadside approach". Recent research, however, tends to converge over five major independent personality traits ("Big-Five" of personality) (e.g., Hogan, 1991): Extraversion, Neuroticism, Openness to Experience, Agreeableness and Conscientiousness (e.g., Goldberg, 1990; Tupes & Christal, 1961/1992). The emergence of the Big-Five model of personality can considerably improve the situation, because it can help in the categorisation and the communication of the results. Furthermore, use of the Big-Five categorisation can control for the issue of variable inconsistency across studies. There are already a number of meta-analytic studies which have summarised research in personality and certain work-related variables (e.g., performance) using of the Big-Five taxonomy (Barrick & Mount, 1991; 1993).



Second, Furnham (1992) suggests that there is a lack of organisational behaviour criteria which capture multiple acts, so representative samples of the behaviour or the phenomenon under consideration can be provided. An adequate sample of behaviour is required for a relationship between a personality measure and behaviour to be established (e.g., Cook, 1984). Personality traits and dispositions can be effective predictors of behaviour provided that multiple, instead of single, acts are considered (e.g., Buss & Craik, 1983; Epstein, 1979; 1980; Fishbein & Ajzen, 1974). Therefore, criteria which are based on cumulative experiences and behaviours (e.g., career outcomes) are more likely to reveal the relationship between personality and work-related variables (Schneider & Hough, 1995). Bell and Staw (1989) consider that career outcome variables are especially suited for studying the effects of personality. Variables that relate to career outcomes (e.g., objective and subjective career success) reflect the effects of a number of processes, behaviours and experiences.

In the present section, major points regarding the use of personality in organisational behaviour research have been presented and the conclusion is that it is justified to use personality as a means of prediction in the organisational environment provided that an adequate trait taxonomy is used and that the criterion variables encompass a variety of behaviours and experiences. In the following sections, the relationship of personality traits with career success, mentoring and networking is considered.

## 5.1 PERSONALITY AND CAREER SUCCESS

### 5.1.1 *PERSONALITY AND OBJECTIVE CAREER SUCCESS*

Most research on the relationship between personality traits and career success has concentrated on indices of objective career success (e.g., promotion rates, salary). The results could be characterised as equivocal and rather weak. This could be partly attributed to the lack of consistency in personality measures and trait-taxonomies across studies, an issue which was discussed above. Furthermore, the situational characteristics

(e.g., occupation, organisation, etc.) may have affected the reported relationships between certain personality traits and career success (Blunt, 1978).

Before progress is made it is important to note that most of the relevant reports are not recent. This may reflect the fact that personality had been almost abandoned as a means of prediction in occupational settings for a considerable time period. In fact, such equivocal and inconclusive results on the relationship between personality traits and work-related outcomes or similar issues (e.g., leadership) have contributed to the criticisms that the trait approach has received. Furthermore, many of the studies which do exist (e.g., Chakrabarti & Kundu, 1984; Eysenck, 1967a; Hemney, 1975; Lynn, 1969) are unsystematic. Their design appears to have been opportunistic and their results do not seem to make a clear contribution to the investigation of the issue. Of course, there are some exceptions (e.g., Blunt, 1978).

In some recent work, Melamed (1995a; 1995b; 1996b) reported relationships between the global factors of the fourth edition of the Cattell 16PF (Cattell, Eber & Tatsuoka, 1970) and objective career success. Melamed's (1995a; 1995b; 1996b) reports deserve some separate presentation because they are contemporary and because a trait-taxonomy that adheres to the Big-Five was used. It has to be kept in mind, however, that Melamed's main intention was not to investigate the relationship between personality and career success. Using a sample that was drawn from the general British population, Melamed (1995b; 1996b) found that scores on Independence were positively related to self-reported salary and managerial level. Scores on Anxiety and Tough-Mindedness were predictors for salary in the negative direction and positive direction, respectively, but not for managerial level. Self-Control emerged as a predictor of managerial level, but not salary (Melamed, 1996b); however, Self-Control did not emerge as a predictor of any objective career success index in two of his previous studies (Melamed, 1995a; 1995b). Considering the patterns by gender, Extraversion was a predictor of men's salary and managerial level (Melamed, 1995a; 1996b); while Independence and Self-Control were predictors of men's managerial level (Melamed, 1996b). For women, personality was a poorer predictor of objective career success. Scores on Independence (Melamed, 1995a; 1996b) and Tough-Mindedness (Melamed, 1996b) were positively associated with managerial level. Most of the relationships in Melamed's studies were not consistent

across samples and their strength varied from low to moderate. The implication is that the direct effects of personality on career outcomes are weak. A review of the research which reports on the relationship between personality and indices of objective career success follows

### *Extraversion*

Extraversion appears to be the most employed personality trait in research which reports on the relationship between personality and indices of objective career success. Warmth, liveliness, forthrightness and group-orientation are the primary factors of the Cattell 16PF5 (Cattell, Cattell & Cattell, 1993) which make the highest contributions to 16PF5's Extraversion global factor (Russell & Karol, 1995). Extraversion relates to interpersonal efficiency which is a very important quality for effectiveness in the organisational environment (Singh, 1987).

At an empirical level, reports on the relationship between Extraversion and indices of objective career success are equivocal. There are some studies which suggest a negative relationship between Extraversion and indices of objective career success (e.g., Eysenck, 1967a; Lynn, 1969; Maitra, 1983). On the other hand, there is research which suggests a positive relationship between Extraversion and objective career success (e.g., Harrell & Alpert, 1989; Henney, 1975; Melamed, 1996a; 1996b). Finally, there is research which failed to identify any particular pattern of relationship (Chakrabarti & Kundu, 1984; Schippmann & Prien, 1989). Only a handful of these studies, however, explicitly investigated the relationship between Extraversion and indices of objective career success (Barton & Cattell, 1972; Melamed, 1996a; 1996b; Harrell & Alpert, 1989; Melamed, 1995a; 1996b). The rest of the studies involved either reports of group means on personality questionnaires (e.g., Chakrabarti & Kundu, 1984) or comparisons between the occupational group under investigation and the general population (e.g., Eysenck, 1967; Glynn, 1969).

Therefore, no particular direct relationship between scores on Extraversion and indices of objective career success, like the number of promotions, should be expected.

### *Anxiety*

There are very few reports on the relationship between Anxiety and indices of objective career success. Emotional stability, apprehensiveness and tension are the primary factors of the Cattell 16PF5 which primarily contribute to the Anxiety global factor (Russell & Karol, 1995). A certain level of emotional stability is desirable, otherwise an individual would not be able to adjust oneself in the social environment (e.g., Baehr & Orban, 1989; Eysenck, 1967a). On the other hand, however, very high levels of emotional stability may lead to lack of sensitivity and responsiveness to social situations.

The empirical results are equivocal. Cattell, *et al.* (1970) and Eysenck (1967a) found successful executives to be emotionally stable in comparison to the general population. Blunt (1978), however, found personnel managers to be emotionally unstable. Notably, the above reports do not refer to relationships between Anxiety or Anxiety related traits and indices of objective career success, but they only refer to mean scores of samples drawn from certain occupational groups. Melamed (1996b) identified a rather weak, though significant, negative relationship between Anxiety and salary levels. However, in other studies Melamed (1995a; 1995b) found no relationship between Anxiety and any index of objective career success. Furthermore, the relationship in Melamed's (1996b) study emerged only when salary was the criterion, but not when managerial level was the criterion; and only when the mixed-gender sample was considered. No relationship emerged when each gender separately was considered.

Therefore, there is no particular reason to expect a direct linear relationship between scores on Anxiety and any index of objective career success.

### *Independence*

The primary factor of the Cattell 16PF5 with the highest loading on Independence is Dominance (Russell & Karol, 1995). Lord, DeVader and Alliger (1986) found that dominance relates to leadership perceptions. Dominance has been considered to play an important role in career success (Schein, V.E., 1973; 1975; Schipmann & Prien, 1989). Research reports confirm this suggestion (Barton & Cattell, 1972; Dobruszek, 1975; Rawls & Rawls, 1974). These reports refer to studies which employed respondents from

various levels in the organisational hierarchy, ranging from executives (Rawls & Rawls, 1974) to individuals in their early career stages (Barton & Cattell, 1972). Furthermore, there are some studies which have identified Independence as a trait possessed by successful individuals at high organisational levels (e.g., Cattell, *et al.*, 1970; McLaughlin, Friedson & Murray, 1983; Melamed, 1995b; 1996b).

On the other hand, however, co-operativeness and group dependence have been found to relate in the positive direction to job advancement in British managers (Rosenstein, 1985). Co-operativeness is one of the major characteristics of the low end of the Dominance factor of the 16PF5 (Russell & Karol, 1995). Furthermore, Cannings and Montmarquette (1991) found a negative association between femininity, which indicates low dominance, and number of promotions; but only for the male part of their sample. Their speculation was that individuals with high masculinity learn to over-rely on the qualities of dominance and neglect other important qualities such as work involvement and productivity.

Therefore, although Independence should be expected to relate to objective career success operationalised as organisational level a direct relationship between Independence and number of promotions should be seen with reservations. Organisational level and number of promotions are qualitatively different indices of objective career success (Tharenou, 1997).

### *Tough-Mindedness*

Tough-Mindedness relates to resolution, decisiveness and “masculinity” (Russell & Karol, 1995). The primary factors of the Cattell 16PF5 that make the largest contribution to Tough-Mindedness are the low poles of Sensitivity and Openness to Change. Low scores on Sensitivity are related to objectivity and low scores on Openness to Change are related to a dislike for the new and the unfamiliar (Russell & Karol, 1995).

Confidence in and willingness to engage in decision-making are considered as important factors in work effectiveness, especially as one ascends the organisational ladder (Cangemi & Kowalski, 1986; Saunders & Stanton, 1976). According to Lord, *et al.*'s (1986) meta-analytic study, masculinity is one of the personality traits which is associated with the others' perceptions about one's ability to lead. Finally, as seen,

Melamed (1995b; 1996b) found Tough-Mindedness to relate to indices of objective career success in the positive direction, though the strength of the relationship varied across indices and genders. On the other hand, however, Melamed (1996b) reported a negative relationship between Tough-Mindedness and managerial grade for a sample of managers drawn from a single organisation in the public sector.

Therefore, a positive relationship between Tough-Mindedness and career success, especially in terms of number of promotions should be expected. However, there are some reservations taking into account the relative scarcity of direct empirical research and one of Melamed's (1996b) reports.

### *Self-Control*

The Cattell 16PF5's primary factors with the highest contribution to Self-Control are Rule-Consciousness and Perfectionism (Russell & Karol, 1995). 16PF5's Self-Control corresponds to the conscientiousness factor of the Big-Five (e.g., Terpylak & Schuerger, 1994). Conscientiousness is characterised by perseverance in task accomplishment, a tendency to organise, willingness to achieve, punctuality, and carefulness (e.g., Goldberg, 1990; John, 1990; McCrae & Costa, 1987).

High Self-Control is considered desirable in the organisational environment because it regulates the expression of feelings and urges which may sometimes be detrimental (Sobchik & Lobanova, 1989). There is research which suggests an association between Self-Control (or conscientiousness) and success on the job or job performance (Barrick & Mount, 1991; 1993; Rawls & Rawls, 1974; Maitra, 1983). Returning to Melamed's studies (1995a; 1995b; 1996b), where respondents from the general British population were employed, Self-Control emerged as a positive predictor of objective career success, but only in one of these studies (Melamed, 1996b).

On the other hand, McLaughlin, *et al.* (1983) found managers who were made redundant to have scored higher on Self-Control than their counterparts who were not made redundant. Furthermore, Melamed (1996b) reported a negative relationship between managerial level and Self-Control in managers from a single public sector organisation. O'Reilly and Chatman (1994) found no relationship between Self-Control (conscientiousness) and early career success. However, they employed a small sample of

graduates from a top MBA programme, which, as O'Reilly & Chatman (1994, p. 622) themselves acknowledge, was very homogeneous in terms of Self-Control levels.

Therefore, no assertion regarding the association between Self-Control and indices of objective career success can be made and lack of association should not be considered as a surprise. Melamed (1996a) briefly summarised the results of a number of studies which referred to the relationship between personality traits and career success. He concluded that the personality profile which seems to be associated with career success includes Extraversion, Independence and Tough-Mindedness.

#### *5.1.2 THE POSSIBILITY OF MEDIATORS IN THE RELATIONSHIP BETWEEN PERSONALITY AND CAREER SUCCESS*

Considering the review that was made above along with Melamed's conclusion, strong direct relationships between personality traits and indices of objective career success should not normally be expected. In cases that significant relationships are found they should be expected to be of moderate strength, at best. The personality factors with the highest likelihood to be directly related to indices of objective career success are Tough-Mindedness and Independence.

Personality traits, however, may relate to indices of objective career success indirectly. Certain personality traits may relate to variables that are themselves related to objective career success in a direct and more potent way than the personality traits. Mentoring and networking can provide a link between personality traits and indices of objective career success. Mentoring and networking refer to interpersonal relationships and processes, which, apart from other factors (e.g., human capital attributes and structural characteristics), are initiated, regulated and maintained by the behaviour of the individuals involved in them (e.g., Kram, 1988). The suggestion is that the relationship between personality traits, mentoring and networking and career success, is a relationship of causal order. This line of reasoning is similar to that of some other authors (esp. Turban & Dougherty (1994)). Thanenou (1997), in her review on managerial career advancement, concluded that, apart from direct effects, personality influences a number of factors, including participation in networks and career support, which, in turn, lead to

managerial career advancement. The reasons to consider that specific relationship patterns exist between mentoring and networking and certain personality traits are considered in the sections that follow the consideration of the relationship between personality traits and subjective career success which comes next.

### *5.1.3 PERSONALITY AND SUBJECTIVE CAREER SUCCESS*

There has been much less consideration of the relationship between personality and subjective career success. An obvious possibility is that the same personality traits which relate to objective career success relate to subjective career success. This follows research on the objective - subjective career success causality relationship which suggests that objective career success is an antecedent of subjective career success (Poole, *et al.*, 1993; Turban & Dougherty, 1994). Following this line of thought, the relationship between personality and subjective career success should not be strong.

The other possibility regarding the relationship between personality and subjective career success draws from suggestions regarding the relationship between dispositions and satisfaction with working life in general (Landy, 1989). These suggestions can be expanded in the case of personality and subjective career success. In particular, this line of thought suggests that certain individuals are predisposed to be more satisfied or dissatisfied with their working lives than others. This suggestion is supported by research which indicates that satisfaction with working life remains generally stable over time (Pulakos & Schmitt, 1983; Staw, Bell & Clausen, 1986; Staw & Ross, 1985); it is affected by the emotional state of the individual regardless of objective facts (Woodward & Chen, 1994); and it is related to the genetic make-up of the individual (Arvey, Bouchard, Segal & Abraham, 1989). Personality traits are conceived to be the manifestation of individual differences in their biological and genetic make-up (Cook, 1984; Eysenck, 1967). Following this line of argument, a direct relationship between certain personality traits and subjective career success is expected. In fact, Gattiker and Larwood (1988) suggested that subjective career success may be related to certain personality traits, though they did not engage in any predictions regarding specific traits.



Of course, the two alternatives are not mutually exclusive. The personality traits that affect subjective career success by affecting objective career success may be different from the traits that affect subjective career success directly. Furthermore, the same trait(s) may affect subjective career success both directly and indirectly.

Empirical work on the issue is very scarce. Scores on subjective career success have been found to relate to sense of competence (Aryee, *et al.*, 1993; Peluchette, 1993) and self-esteem (Peluchette, 1993). No research which adheres to a relatively well-established personality framework (e.g., Big-Five (e.g., McCrae & Costa, 1987)), or which uses certain personality variables that adhere to such a framework, exists.

In the next sections the literature that provides suggestions regarding the links between personality with mentoring and networking is presented.

## 5.2 PERSONALITY AND MENTORING

### 5.2.1 PERSONALITY AND RECEPTION OF MENTORING

A number of authors have raised the issue of the impact of personality on mentoring (Fagenson, 1989; Kanter, 1977; Koberg, *et al.*, 1994; Noe, 1988a; Roche, 1979; Scandura & Raggins, 1993; Turban & Dougherty, 1994). The underlying assumption is that to attract the attention of a mentor and to initiate and sustain a relationship with a mentor the individual needs to possess special personality characteristics. Furthermore, Kram (1986) suggested that some individuals may actively try to be mentored whilst some others may actually prefer not to establish a relationship with a mentor. These suggestions were made on the basis of considerations that there is very little knowledge on the process of the formation of mentoring relationships and on why individuals differ in the amount of mentoring they receive (Ragins & Cotton, 1993; Whitely, *et al.*, 1992).

Research on the relationship between mentoring and gender role orientation suggests some systematic relationship between certain personality traits and reception of mentoring. Scandura and Ragins (1993) found that mentored individuals, regardless of gender, were more likely to be androgynous or masculine. Similarly, Fagenson (1989)

found protégés to be more masculine and more feminine than nonprotégés. Spence and Helmreich (1978) have described masculinity as instrumentality/assertiveness and femininity as expressiveness/empathy. Masculine gender role orientation is associated with independence, aggressiveness/assertiveness, activity, competitiveness, self-confidence and ability to work under pressure. Feminine gender role orientation is associated with emotionality, passivity, devotion, helpfulness, empathy, sensitivity and nurturance (Spence, 1984; Spence & Helmreich, 1978). Androgyny refers to a balanced state between masculine and feminine behavioural attributes, which offers the advantage that it allows individuals to exhibit masculine or feminine attributes depending on the situational contingencies (Bem, 1974; Spence, 1984). Traits associated with masculinity and femininity may play a role at different stages of the relationship with a mentor. Masculine or androgynous individuals may be less hesitant and more assertive in initiating the relationship (Ragins & Cotton, 1991). Rice & Brown (1990) study, where scores on a measure of independence, a masculine trait, was found to be associated with perceived readiness to be a protégé, supports this suggestion. Furthermore, individuals with masculine attributes may be more likely to be noticed and selected by mentors as protégés, because individuals selected as protégés tend to be assertive and outgoing organisational members with high visibility (Kram, 1988). After the initiation stage in the mentoring relationship, however, possession of feminine attributes along with masculine ones (i.e., androgynous individuals) may be more advantageous in sustaining the relationship. Very high levels of independence, related to masculine gender role, for instance, can lead to an unwillingness to accept the mentor's advice once the relationship has been established, impairing the relationship (Scandura & Ragins, 1993).

There are some other suggestions linking personality with mentoring. Fagenson (1989) suggested that protégés may have higher needs for affiliation, power and achievement than non-protégés. She based her suggestion on the fact that the mentor-protégé relationship can apparently satisfy these needs. Fagenson (1994) obtained data on self-esteem, need for power, need for achievement and need for autonomy in a sample of protégés and nonprotégés. Although she did not provide any comparison statistics between protégés and nonprotégés in any of those variables, the group means she provided suggest that protégés had higher scores in need for power, need for achievement

and self-esteem than nonprotégés. Peluchette (1993), however, did not identify any relationship between scores on reception of mentoring and self-esteem.

The most well designed study on the relationship between personality and reception of mentoring has been conducted by Turban and Dougherty (1994), who investigated the relationship between three personality variables, reception of mentoring and career success. The personality variables included locus of control (Rotter, 1966), self-monitoring (Snyder, 1974) and emotional stability (operationalised as high self-esteem and low negative affectivity (Brockner, 1988; Levin & Stokes, 1989; Watson & Clark, 1984)). Using linear structural equation modelling, they concluded that all the personality variables individually increased the likelihood of reporting reception of mentoring by influencing attempts to initiate mentoring relationships. Turban and Dougherty (1994), however, investigated the views of individuals who were the receivers of mentoring functions. The view in the literature is that protégés have much less control than the mentors in the initiation and sustenance of a mentoring relationship (Keele, 1986; Kram, 1988). Therefore, personality traits which are related to reactive behaviours (e.g., openness to the new and receptivity to suggestion - in Cattell 16PF5's terms, the negative pole of Tough-Mindedness) may contribute more in the reception of mentoring. This idea seems to be endorsed also by Turban and Dougherty (1994). In support of this consideration, research with undergraduate students suggested that scores on a measure of openness to the new and acceptance of the diverse were positively associated with perceived readiness to be a protégé (Rice & Brown, 1990).

Additional support for the idea of a relationship between personality and reception of mentoring is gained from the study of job performance. Authors suggest that mentors would prefer to mentor subordinates who perform well and who are dedicated organisational members (e.g., Chao, *et al.*, 1992). Job performance consists of task performance (i.e., the technical activities) and contextual performance (Borman & Motowidlo, 1993; Bateman & Organ, 1983; Campbell, 1990; Landy, Shankster & Kohler, 1994). The latter refers to behaviours that support the psychological, cultural and social context in which task performance takes place. Such behaviours include organisational citizenship behaviours, which include persistence on task accomplishment, willingness to do the "extra mile" and pro-social behaviours (Bateman & Organ, 1983;

Organ, 1988; 1988a). Personality traits, especially Self-Control and Tough-Mindedness, are good predictors of contextual performance (Borman & Motowidlo, 1993; Hough, 1992; Hough, *et al.*, 1990). Therefore, personality may affect mentoring by affecting the mentor's perceptions of the protégé's contextual performance.

Apart from suggestions and implications, however, direct research on personality and mentoring is scarce. A very limited number of personality variables have been employed and in some cases research was stimulated by the failure to find any consistent relationship between gender and mentoring. More importantly, most of the very limited research so far is unconcerted, and it employs personality characteristics and measures which do not fit into a specific personality theory or framework [e.g., Eysenck's (e.g., Eysenck, 1947; 1967), Cattell's (e.g., Cattell, 1945; 1950), or the Big-Five account (e.g., Norman, 1963; McCrae & Costa, 1987)]. Turban and Dougherty (1994) pointed at the need for further research to identify personality characteristics related to mentoring.

#### *5.2.2 PERSONALITY AND PROVISION OF MENTORING*

It could be assumed that because mentors are organisational members with more power than the potential protégés they should not encounter problems in attracting the protégés they are interested in. It has been suggested, however, that senior organisational members also need a repertoire of special interpersonal skills to be able to form developmental relationships with subordinates (Kram, 1988). In addition, as in the case of protégés, inter-individual differences in the motivation to provide mentoring exist (Kram, 1986; 1988). Motivation to provide mentoring may relate to certain personality traits (e.g., Independence, Tough-Mindedness). Furthermore, potential protégés would prefer to be mentored by superiors who show pro-social behaviour (e.g., helping others, being co-operative and responsible). Research on the relationship between job performance and personality traits suggests that Self-Control and Tough-Mindedness relate to the exhibition of such behaviours (Hough, 1992; Hough, *et al.*, 1990). Therefore, the personality of the potential mentor can also be of importance. Empirical research on the issue is much more limited than, the already very limited, research on the relationship between reception of mentoring and personality. The only study where a relationship

between provision of mentoring and personality was reported as by Rice and Brown (1990), who found a positive association between perceived competence to be a mentor and scores on measures of openness to the new (suggesting low Tough-Mindedness) and Independence.

### 5.2.3 PERSONALITY AND NETWORKING

As in the case of mentoring, there are suggestions, though fewer, that participation in emergent organisational networks requires certain attributes that are not present in all individuals. Kram and Isabella (1985) suggested that there is the need to identify individual differences in a range of attributes which are instrumental in shaping and maintaining relationships with peers. Furthermore, some findings imply that personality plays a role in the participation in emergent organisational networks (Brass, 1985). Brass (1985) found that prescribed-by-the-job interaction with other organisational members was related neither to ratings of influence in the organisation nor to being promoted, although networking was related to these variables. The implication is that mere contact with others on the basis of performing work functions is not sufficient for an individual to build an effective network and special characteristics play a role in the formation of such a network. Tichy (1981) noted that for benefits to be gained from participation in emergent networks special skills are needed. Finally, Cannings (1988, p. 76), commenting on the relationship between networking and objective career success that she identified, made the direct suggestion that this relationship must be caused by the effects of personality on the formation and participation in emergent organisational networks.

Complementing the above findings, Kram (1988) suggested that even when the individual has the intention to form relationships with others in the workplace there are other factors, inherent to the individual, which can significantly affect one's success in building such relationships. Kram (1988) identified such factors as inter-personal skills, ability to manage conflict and willingness for self-disclosure.

Empirical research specifically addressing the relationship between personality and networking is extremely scarce. Kram (1988) speculated that an individual's view of

self-competence should affect the probability to develop mutual relationships with peers, because if individuals consider that they can bring something in a relationship it is more probable to engage in the formation of relationships with colleagues. Peluchette's (1993) results go along with this suggestion. She reported significant positive relationships between her short measure of networking and measures of self-esteem and sense of competence, in a sample of US academics. Furthermore, apart from the fact that empirical work on the issue is virtually non-existent, there is no investigation, or even suggestion, which complies to a certain theoretical framework of personality (e.g., the Big Five).

## CHAPTER 6: RESEARCH METHODOLOGY

## CHAPTER 6. RESEARCH METHODOLOGY

### 6.1 STATEMENT OF THE RESEARCH PROBLEM

The present work aims at developing a model of causal relationships that integrates personality, mentoring and networking and career success, and at investigating gender differences in the inter-personal relationship variables and the career success variables.

The previous review of literature provides the rationale for expecting a causal link between these three sets of variables: personality, mentoring and networking, and career success. Of the proposed model to be developed and tested, only parts have been considered and empirically tested at a satisfactory level, e.g., the relationship between mentoring and career success (e.g., Aryee & Chay, 1994; Kram, 1983; 1988; Scandura, 1992; Whitely & Coetsier, 1993). For other parts, there are only assumptions and suggestions, anecdotal “evidence” and inadequate empirical work, e.g., the relationship between networking and career success or the relationship between mentoring and networking (e.g., Dreher & Bretz, 1991; Gould & Penley, 1984; Keele, 1986; Kram, 1988; Kram & Isabella, 1985; Peluchette, 1993; Rosenbaum, 1979; Van Maanen & Schein, 1977; Woodall, *et al.*, 1995). Finally, for most parts, there are only vague assumptions, implications, and suggestions, e.g., the relationship of personality with mentoring and networking (e.g., Cannings, 1988; Fagenson, 1989; Kram, 1988; Kram & Isabella, 1985; Scandura & Ragins, 1993; Turban & Dougherty, 1994), or there is a complete lack of literature directly dealing with the issue, e.g., the relationship between personality and subjective career success. Equally important is the fact that there are no theoretical considerations integrating all relationships into a cohesive model that can improve understanding regarding mechanisms for career success. Furthermore, although provision of mentoring is an integral part of the mentoring phenomenon (e.g., Kram, 1988), apart from assumptions and suggestions, there is virtually no empirical work on its relationship with other organisational behaviour variables, especially career success and personality (e.g., Kram, 1988; Nykodym *et al.*, 1995; Zey, 1984). Therefore,



inclusion of provision of mentoring in the models is another important contribution of the present work.

The intention to develop and test a causal model is in line with the suggestion of authors in the field (e.g., Tharenou, *et al.*, 1994; Turban & Dougherty, 1994). Tharenou, *et al.* (1994, p. 899) suggested that “models of sequenced patterns of relationships” need to be developed and tested. Relevant research has also suggested and stressed the need to consider gender-specific models of career success (e.g., Cannings & Montmarquette, 1991; Melamed, 1995a; 1996b; Tharenou, 1997). Estimation of gender-specific models is appropriate when gender has been shown to moderate the relationship between the predictors and the criterion variables (e.g., Melamed, 1995a; Shackett & Trapani, 1987; Tharenou, *et al.*, 1994). The mixed-gender model is also important, however, as it can provide suggestions about the pattern of relationships regardless of gender (Tharenou, *et al.*, 1996).

It was illustrated that gender differences in career success is an issue which is not static and that investigation of gender differences in career success in British organisational environments is an issue that warrants investigation. It was also illustrated that investigation of gender differences in mentoring, networking and career success in organisational environments that appear to diverge from the traditional male-dominated pattern is especially important. The ratio of men to women in an organisation may affect gender differences in indices of career success and their antecedent variables, such as mentoring and networking (Chused, 1988; Tharenou & Conroy, 1994). Furthermore, Aryee, *et al.* (1994) noted that adherence to the employment of predominantly male samples in male-dominated occupations and organisations limits the generalisation and usefulness of the findings. In a similar line, Ibarra (1993) noted the importance of investigating patterns of relationships in organisational contexts where members of a group which is typically in majority (e.g., men) are in the minority (e.g., men in a female-dominated firm). This type of investigation can provide information which can shed additional light on the unclear current state of knowledge. By employing respondents from non male-dominated organisational environments, the present work can provide a unique contribution by investigating, (a) whether gender differences in objective career success, mentoring and networking are eliminated, or even reversed, in organisations

which do not appear to be male-dominated; and (b) whether mentoring and networking can provide an additional, or a definite, explanation for any gender differences in career success in an environment which does not appear to be male-dominated. As already seen, it has been suggested that mentoring and networking may be important factors in the determination of gender differences in indices of objective career success, beyond the role played by human capital and structural factors (Melamed, 1995b).

The issue regarding the need to consider both objective and subjective career success has also been presented. Adhering to the recommendations in the literature, indices of objective and subjective career success will be employed in the investigation (Gattiker & Larwood, 1990; Peluchette, 1993).

Consideration of career in terms of advancement in the hierarchy of a single organisation is becoming arguably less appropriate, due to recent trends in restructuring within organisations (Inkson & Koe, 1993). For instance, involuntary interruptions in employment and change of work organisations due to redundancies is becoming common (Hirsh, 1987; Schneer & Reitman, 1990). The notion and the importance of the “boundryless” career, that is a career outside the single organisation context, has been introduced (e.g., Arthur, 1994). However, advancement in the organisational hierarchy is still considered very important by employees (e.g., Orpen & Andrews, 1993). Promotions (and demotions) are important events in the careers of most individuals because of changes in prestige, status and power (Cannings & Montmarquette, 1991; Gattiker & Larwood, 1988; Nicholson & West, 1988; Rosenbaum, 1979; 1984; Zanzi, Arthur & Shamir, 1991). Furthermore, Arthur (1994) stresses that the “boundryless” career should be just seen as an alternative and complement and not as a replacement of the traditional organisational career. Finally, the investigation and discovery of factors that relate to intra-organisational career advancement can offer valuable knowledge about important intra-organisational processes. Therefore, career will be considered in the boundaries of a single organisation.

The need to use an established trait-taxonomy on which the personality measurement will be based has also been presented. The Big-Five taxonomy will be adhered to. As briefly mentioned earlier, the Big-Five factors refer to the emerging consensus regarding the universal existence of five basic personality traits (e.g., Digman,

1990; Digman & Inouye, 1986; Goldberg, 1981; 1990; 1992; 1993; John, 1990; McCrae & Costa, 1987; Norman, 1963). The terms to describe the Big-Five factors vary slightly across authors. However, in recent years there seems to be a convergence towards the following terms: Extraversion, Neuroticism, Openness, Agreeableness, Conscientiousness (e.g., Costa & McCrae, 1985; John, 1990; Schneider & Hough, 1995)<sup>2</sup>. The global factors of the Cattell 16PF5 (Cattell, *et al.*, 1993; Russell & Karol, 1995) will be used in the present investigation. These global factors are: Extraversion, Anxiety, Tough-Mindedness, Independence and Self-Control, and they correspond to the Big-Five personality dimensions (Conn, 1993; Conn & Rieke, 1994; Russell & Karol, 1995; Schuerger, 1995; Terpylak & Schuerger, 1994). In fact, the derivation of the Big-Five personality factors has been largely based on Cattell's (1945) original work and his trait descriptors (Digman & Takemoto-Chock, 1981; Fiske, 1949; Norman, 1963; Tupes & Christal, 1961/1992). The correspondence between the 16PF5's global factors and the Big-Five factors is as follows: Extraversion - Extraversion, Anxiety - Neuroticism, Tough-Mindedness - Openness (-), Self-Control - Conscientiousness, Independence - Agreeableness (-) (e.g., Conn & Rieke, 1994; Terpylak & Schuerger, 1994).

The Big-Five model is not without its critics, criticisms mainly focusing on its exhaustiveness and comprehensiveness (Hogan, 1982; Hough, 1992; Waller & Ben-Porath, 1987). However, there have been responses to these criticisms (e.g., Costa & McCrae, 1988; McCrae & Costa, 1985; 1989a; 1989b; McCrae, Costa & Piedmont, 1993; McCrae & John, 1992). Furthermore, the alternative personality accounts suggested by the critics still revolve around the Big-Five factor model. To illustrate, Tellegen (1993) suggests a seven-factor model, which includes the Big-Five factors. Hogan (1982) suggested a six-factor model, which included four of the Big-Five factors; the two other factors were derived by dichotomising the Extraversion factor of the Big-Five [it is noted that Extraversion is the most well-validated factor in trait personality research (e.g., Cattell, 1994)]. Hough and her colleagues suggested nine factors (e.g., Hough, 1989; 1992; Hough, Eaton, Dunnette, Kamp & McCloy, 1990). These included Hogan's (1982) six factors plus achievement, locus of control and masculinity/femininity. Finally, there is also some criticism on the methodology used for the derivation of the Big-Five factors, namely the lexical hypothesis (i.e., that traits are

described in language) (Tellegen, 1993). However, this criticism is not specific to the Big-Five model, but it relates virtually to all research under the trait approach to personality (hence, including Allport and Odbert's (1936) seminal work). Therefore, although the Big-Five account may not be without problems it seems to be the most appealing, best validated and most accepted of the alternatives.

The design of the present work adheres to a combination of the classic personality theory and the classic organisational behaviour approach to personality in the work environment. The former treats personality variables as independent variables and work-related behaviours, phenomena or outcomes as dependent variables (Furnham, 1992). The latter focuses on the relationships between work-related behaviours or outcomes and personality variables (Furnham, 1992). The intention is to identify some "normal", to borrow Furnham's (1992) term, personality traits which can be predictive of certain career-related variables (i.e., objective and subjective career success) and workplace phenomena (i.e., mentoring and networking).

Finally, the consideration of career that is adopted in the present work focuses on certain individual career outcomes (i.e., career success) that evolve in one organisation, presumably being a function of career and work processes. These variables are considered in relation to certain interpersonal processes (i.e., mentoring and networking) within this work organisation and individual dispositions (i.e., personality traits). Therefore, the notion of work experiences, dynamic social space (organisation and the interpersonal processes) and time and motion (advancement) that are considered vital in the study of careers are inherent in the consideration of career in the present work (Arthur, *et al.*, 1989; Hughes, 1971; Kram, 1988; McHugh, 1968; Van Maanen & Schein, 1977).

## 6.2 RESEARCH DESIGN

### 6.2.1 CONTROLLING FOR STRUCTURAL FACTORS

The focus of the present work is on individual differences and not on organisational, economic or societal factors (i.e., structural factors) as sources of

explanation. To be able to identify genuine relationships between variables at an individual level, control must be imposed over variables of a structural nature, whose effects may confound the results. It was illustrated that there are a number of organisational and environmental (e.g., labour market forces) variables which can affect the variables employed in the present investigation and their inter-relationships. Identification of and dealing with potential confounding variables is a major validity issue in any research design (e.g., Cook & Campbell, 1979; Graziano & Raulin, 1989; Spector, 1981). Controlling for the effects of structural variables, or as many of them as possible, is, therefore, imperative for the validity of the study.

It was decided to control for structural factors by conducting the investigation in a uniform environment. A uniform environment would consist of either one organisation or a limited number of similar or identical organisations. There should be uniformity across organisations in factors like the type of industry (e.g., public or private, service or manufacturing), organisational size and structure, personnel policies, and so on. Furthermore, uniformity in environmental conditions such as unemployment rate and economic state in the geographic region was important. Uniformity in these factors increases the likelihood that factors such as culture, structure, economic and employment history, and organisation human resource policies are similar for all individuals involved in the study. Following these considerations, a small number of organisations from the same sector of the economy, involved in the same type of business, located in the same geographical location and using the same promotion procedures was used. Designs of this type have been employed in the career success literature under rationales similar to that presented above (Cannings, 1988; 1988a; Cannings & Montmarquette, 1991; Gattiker & Larwood, 1986).

#### *6.2.2 CONTROLLING FOR HUMAN CAPITAL, CAREER STAGE, AND WORK INVOLVEMENT*

It was illustrated that individual-level variables of human capital or career stage nature (e.g., age, education, class of social origin, marital status, initial grade, tenure) can affect career outcomes. Variables of this type were not of interest in the present investigation, but their effects must be controlled for potential confounding. The method

of statistical control at the data analysis stage was chosen. Statistical control is recommended by a number of authors (e.g., Spector, 1981); and it is widely used in research on career success (e.g., Aryee, *et al.*, 1996; O'Reilly & Chatman, 1994; Schneer & Reitman, 1993; Whitely & Coetsier, 1993). Not only will the procedure of statistical control protect against confounding of the results, but use of statistical control will also provide information regarding whether any identified relationships among the variables of interest exist above the effects of these control variables (e.g., Whitely & Coetsier, 1993).

The following human capital variables were statistically controlled for: age, education, class of social origin, marital status, initial organisational grade, and organisational tenure. Prior work experience, a human capital variable that affects objective career success (e.g., Agarwal, 1981; Aryee, *et al.*, 1996) and subjective career success (Cox & Harquail, 1991), is incorporated in initial grade. Career stage is captured by the combination of tenure and age. As concluded earlier, because of the changing nature of careers, when considering career in a single organisation, tenure with the organisation, combined with age, is a better indicator of career stage in this organisation than the traditional career stage conceptualisation in terms of chronological age periods (e.g., Hall, 1976).

Work involvement was also statistically controlled. Work involvement is an individual characteristic which relates to career success and the extensiveness of one's intra-organisational networks and mentoring. Work involvement is defined as the attitudes and behaviours which relate to individuals' psychological identification with their work (e.g., Kanungo, 1982; Lobel, 1991). It refers to the extent of the centrality of one's work in one's life (e.g., Elloy & Terpening, 1992). A variety of terms and operationalisations which refer to the construct exist [e.g., hours worked per week (Aryee, *et al.*, 1996; Whitely & Coetsier, 1993) or Likert-type scales (e.g. Kanungo, 1982; Lodahl & Kejner, 1965)]. This is indicated by the definition of these terms and the content of their measures. For instance, "work role salience" and "importance of work", employed by Aryee, *et al.* (1994) and Schneer and Reitman (1994), respectively, refer to the same construct as work involvement refers to. In the present work, the term "work

involvement” has been chosen. However, any of these terms could have been used instead.

Work involvement relates to objective career success and subjective career success (Aryee, *et al.*, 1994; 1996; Schnerer & Reitman, 1990; 1993; 1994; Warr, 1982; Whitely & Coetsier, 1993). Regarding mentoring, it is suggested that potential mentors pay attention to potential protégés who show strong involvement in their work, perform well and seem promising organisational members (Chao, *et al.*, 1992; Collins, 1994; Kram, 1983; Whitely & Coetsier, 1993). Olian, *et al.* (1993) found that mentors strongly preferred to mentor on-paper descriptions of subordinates who performed highly over on-paper descriptions of subordinates who performed moderately. Demonstration of effort, which should be associated with work involvement, is one of the dimensions of job performance (Campbell, 1990). Furthermore, research suggests that one of the major factors of attraction among colleagues at work is perceived performance (Feren, Carroll & Olian, 1988). When work is central to one’s life it is more likely that one’s constellation of relationships contain individuals from one’s work place, those being peers, subordinates or superiors (Whitely & Coetsier, 1993). If an individual is not strongly involved in one’s work it is more likely that one’s relationship constellation will predominantly consist of individuals outside the work place (Kram, 1988).

Therefore, the effects of work involvement may also confound the relationships among the variables to be investigated. To illustrate, Extraversion should be positively related to reported networking and, maybe, to reported mentoring. However, an extravert individual with low work involvement should be less likely than an extravert individual with high work involvement to establish relationships with other individuals in the work organisation. The former individual would have much less interest in, or opportunity to, establishing relationships with colleagues. Furthermore, an extravert individual with low work involvement may be less likely than an extravert individual with high work involvement (or even than an introvert with high work involvement) to be approached by a potential mentor. Work involvement does not refer to interpersonal processes or personality traits, though it may be related to certain personality traits (Elloy & Terpening, 1992). Hence, it will be employed only as a control variable. This is in line with prior research on predictors of objective and subjective career success (Schnerer &

Reitman, 1990; 1994). Whitely & Coetsier (1993) employed work involvement as a control variable in their investigation of the relationship of mentoring with objective and subjective career success.

### 6.2.3 *CROSS-SECTIONAL VS. LONGITUDINAL DESIGN*

The nature of the research design that was employed in the present work is cross-sectional, which is a type of correlational design which involves collection of data at one point in time (e.g., Spector, 1981). Meyers and Grossen (1978) noted that correlational research techniques are among the most powerful and useful available in social sciences. This is because a large number of individuals can be assessed on a large number of variables, allowing at the same time for the free variation of the variables under investigation so the nature and strength of the relationship can be determined without loss of data (Crano & Brewer, 1973). On the other hand, the limitation of cross-sectional research designs is that they do not usually allow for safe conclusions about causality relationships among the variables under investigation (e.g., Crano & Brewer, 1973; Weiss & Adler, 1984; Spector, 1981). Safer conclusions regarding causality can be achieved with the use of a longitudinal research design. Longitudinal research designs have been recommended in the career literature as their use increases the likelihood of taping dynamic processes (e.g., Feldman, 1989; Tharenou & Conroy, 1994).

One of the major reasons for not employing a longitudinal design in the present investigation relates to time constraints. For a career in an organisation to start developing, a considerable number of years (which should well exceed the duration of a doctoral thesis) are needed. Furthermore, the present study assesses mentoring that the individual has provided and its relationship with the amount of mentoring that the individual has received. For individuals to reach the stage to be mentors in the classical definition of mentoring, they have to reach the middle career stage in a particular organisation. This also typically calls for a considerable amount of time.

Apart from practical limitations, however, and on methodological grounds, correlational research designs are appropriate for exploratory investigations of relationships among variables (Crano & Brewer, 1973; Spector, 1981). This is largely



the case in the present investigation. On the basis of the conclusions drawn from this initial cross-sectional investigation suggestions and guidance for longitudinal and quasi-experimental designs can be provided.

#### 6.2.4 *WHY QUESTIONNAIRE DESIGN*

Data were collected by means of questionnaires. An obvious reason for the choice of the questionnaire method to collect data is the use of personality traits in the investigation. Practically, when a reasonably high number of participants are used, there is no other method for measuring personality as it is defined by the trait theory.

However, there are other reasons for the use of the questionnaire method, which are at least equally important to the use of personality traits. It has been noted that career research has been dominated by qualitative work; and that there is a need for research on careers to stop relying on qualitative data and to start investigating formally testable hypotheses (Feldman, 1989; Fisher, 1986; Tharenou, *et al.*, 1994). Qualitative studies are useful in terms of theory and hypotheses formulation. They have led, however, to the “curse ... much of what we believe about careers is speculative and unverified (and often unverifiable)” (Feldman, 1989, p. 148); a point that has also been implied by Fagenson (1988) when she commented on the qualitatively based and quantitatively poor early research on mentoring. Theoretical and experience based explanations must be quantitatively integrated and tested using multivariate models (Tharenou, *et al.*, 1994).

Adequate qualitative research on mentoring and networking exists, to allow for the development of valid scales. Furthermore, this research has led to speculations concerning the relationships of mentoring and networking with personality. Hence, at this point research adopting a quantitative basis is needed to investigate the substance of these speculations and to suggest possible routes for further research.

The next section will present a possible alternative research design to the one that was chosen for the present investigation. This type of design has been employed by a number of authors (e.g., Melamed, 1996b) and it is felt that justification should be made on why this type of design was rejected in the present investigation.

### 6.2.5 UNIFORM VS. VARIABLE STRUCTURAL ENVIRONMENT

An alternative research design to that employed in the present work would be a cross-sectional design employing a sample of individuals working in a variety of organisations. When respondents from a variety of organisations are employed, the potential confounding of structural factors (i.e., types of organisations and the environment in which they are embedded) can be done by means of statistical techniques. This method has been employed by a number of authors (e.g., Chao, *et al.*, 1992; Melamed, 1995b). The advantage of this type of design would be in terms of greater external validity and generalisation of the results (e.g., Blalock, 1984; Cannings, 1988; Fagenson, 1988; Feldman, 1989; Melamed, 1996b; Olson & Becker, 1983). Furthermore, more clear-cut results could be obtained because, most likely, a more heterogeneous sample would be obtained. The more heterogeneous the sample the greater the likelihood an existing relationship being identified (Nunnally, 1978). To illustrate, in the case of one or very few similar organisations it is likely that personnel selection procedures or individual self-selection [i.e., according to person organisation-fit theory (e.g., Holland, 1973; 1985)] will yield organisational members with similar values, attributes and, maybe, personality characteristics.

On the other hand, however, it is doubtful that proper control over structural variables relevant to this case can be achieved by means of statistical techniques. Hence, the danger of confounding of the results becomes imminent. This consideration is strongly supported by Lewis' (1986) comments on his inconclusive results where he invoked this particular problem. Calder, Phillips and Tybout (1981) stress that use of homogeneous samples enhances the validity of the statistical conclusions. Patterns of relationships identified in homogeneous samples are most likely to represent lower limits as illustrated by Melamed's (1996b) investigation. To complement this suggestion, studies which employ heterogeneous samples (e.g., multiple organisations from different sectors with various sizes and structures) are especially prone to obtaining inconsistent relationship patterns across indices of objective career success (e.g., Aryee, *et al.*, 1996). Of course, inconsistent model patterns across indices of career success may lead to insights and suggestions for further research as in the case of Melamed's (1996b) study.

However, Melamed (1996b) had employed both a homogeneous and a heterogeneous sample. Furthermore, Melamed (1996b) himself acknowledged the problems associated with use of heterogeneous samples in career research.

The next point is that the present design makes generalisation of the results in similar organisations quite safe (Colarelli, *et al.*, 1987). The interpretation of the relationship patterns is easier and safer because there is organisation-specific knowledge concerning the factors which may influence the variables of concern (Cannings, 1988; Gerhart, 1990; Haberfeld, 1992). In the present work, this is illustrated by considering the validity of the causal path models, in particular the direction of causality between mentoring and networking. It was concluded earlier that the organisational context must be taken into account in the decision process regarding the causality direction of the relationship.

Finally, and maybe most importantly, the literature suggests that research designs which employ a particular type of organisation or very few organisations with uniform structural characteristics are especially suitable for investigations of career advancement (e.g., Anderson, *et al.*, 1981; Cox & Harquail, 1991; Gould & Penley, 1984; Lewis, 1986; Luthans, *et al.*, 1988; Nkomo & Cox, 1989; 1990; Spurr, 1990; Zanzi, *et al.*, 1991). The major reasons can be summarised in some complementary points made by Gattiker and Larwood (1990) and Zanzi, *et al.* (1991): (a) environmental factors are different across types of industry; (b) the study of a number of differing organisations, where different patterns of relationships probably exist, may lead to significant relationships cancelling one another out; (c) a large number of different organisations imposes great difficulties in finding a comparable measure of advancement for all participants. In fact, on the basis of these concerns, Zanzi, *et al.* (1991) restrained from investigating the relationship between networking and career success, reasoning that their sample consisted of individuals from a variety of organisations.

To summarise, in the context of the present investigation confounding of the results due to influence of structural variables is a more serious problem than limits to the external validity of the study. A valid result can be generalised and further substantiated with additional research in other types of organisations (Cannings, 1988; Gerhart, 1990).

However, an erroneous result can lead to false conclusions, hence, false directions for further research and for practice.

### 6.3 SETTINGS AND MEASURES

#### 6.3.1 ORGANISATIONAL SETTING

The organisations for the present investigation were selected to represent a non-male-dominated environment. It has been suggested that women should be more likely to succeed in their careers in organisations where they constitute the majority of the work force (Melamed, 1995a). According to Melamed (1995a; 1995b), organisations that conform to this type are more likely to be found among education and public sector organisations where equal opportunities policies are more likely to be implemented. Organisations from the educational sector were employed in the present work.

Responses from clerical and administrative staff employed in three Universities in the Northwest of England were used. Permission to conduct the study was granted by the Head of Personnel in each of them. Furthermore, in all cases the relevant Unions were in agreement with the study. The Universities are referred to as University 1, University 2 and University 3. The hierarchical systems used for clerical/administrative staff by University 2 and University 3 are identical. University 1 employ a somewhat different hierarchical system, but it still consists of the same number of grades. The hierarchical structures of both are described below. This slight dissimilarity in the hierarchical systems between Universities 2 and 3 and University 1 will not impose problems with the validity of the study because the interest of the present investigation lies on the relationship between variables. The promotion procedures used in all Universities are identical.

University 1: A hierarchical system consisting of 11 grades is used. The codes given to each grade are: Grade A, Grade B, Grade C, Grade D, Grade E, Grade F, OR (Other Related Staff) Grade 1, OR Grade 2, OR Grade 3, OR Grade 4, OR Grade 5. Each grade is further divided into sub-grades or stages (the term officially used by the administration of the University). The number of stages within each grade varies within a

range of 5 to 8 stages. An upwards move from one stage to another, although accompanied by increase in salary, is not considered a promotion. Only an upwards move in grade is considered a promotion. From the description of the responsibilities and accountability appropriate in each grade it was concluded that only individuals in Grade D and above have a considerable latitude of work behaviour and a wide range of responsibilities (e.g., serious supervisory, financial, and administrative responsibilities) to be able to provide mentoring functions. Gattiker and Larwood (1988) used a similar procedure to develop a criterion to identify managers from nonmanagers. The term “manager” is not officially employed by the personnel department of the University, at least with regard to clerical and administrative grades<sup>3</sup>. At the time the investigation took place, there were 584 clerical/administrative (Grade A to Grade F and OR Grade 1 to OR Grade 5) staff employed on a full-time basis in the University. According to information provided by the personnel department of the University, at the time of the survey there were 447 full-time employees in grades A to F and 138 employees in the OR grades. To achieve uniformity with Universities 2 and 3 in the reports in the present work, the above grades were coded as following: Grade A to Grade F were coded as Grade 1 to Grade 6; and OR Grade 1 to OR Grade 5 were coded as Grade 7 to Grade 11.

University 2 and University 3: A hierarchical system which consists of 11 stages (the term used by the administration of the Universities) is employed for the clerical and administrative staff. The codes which are officially assigned to each stage are: Scale 1, Scale 2, Scale 3, Scale 4, Scale 5, Scale 6, SO1 (Senior Officer 1), SO2, PO1 (Principal Officer 1), PO2, PO3. Each scale is further divided into sub-scales. The number of sub-scales within each scale varies within a range of 3 to 5. Upwards move from one sub-scale to another, however, although accompanied by increase in salary, is not considered a promotion. Only an upwards move in scale is considered a promotion. As in the case of University1, the description of the responsibilities and accountability appropriate in each grade were consulted. It was concluded that individuals in scale 4 and above have a considerable latitude of work behaviour and a reasonably wide range of responsibilities to be considered as having the opportunities (and power) to provide mentoring. As in the case of University1, the term “manager” was not officially used with regard to clerical and administrative personnel by the personnel departments in Universities 2 and 3. At the

time the study took place there were 466 individuals employed on a full-time basis as clerical/administrative staff in University 2 and 415 in University 3. The term “grade” instead of scale will be used in the present work for uniformity of terms across the three Universities. Therefore, the above scales were coded as following: Scale 1 to Scale 6: Grade 1 to Grade 6; SO1: Grade 7; SO2: Grade 8; PO1 to PO3: Grade 9 to Grade 11.

Considering all three Universities, for grades 1 to 4 the ratio of women to men is approximately 8 to 1 (714 women to 88 men); for grades 5 to 11 the ratio of women to men approximates 1 (337 women to 327 men) <sup>4</sup>. The promotion process for clerical and administrative employees was similar to all three Universities <sup>5</sup>.

Some points to be noted before the description of the advancement procedure are the following: (i) there is no formal mentoring system in operation and (ii) there is no performance appraisal system. Instead, there is an appraisal evaluation scheme for all clerical and administrative employees which is conducted every two years. Officially, the purpose of this evaluation is “developmental” (e.g., identifying training and development needs).

Before the appraisal evaluation, the head of the department of each employee prepares a report regarding the employee. This report is taken into consideration in the appraisal. This report may contain a recommendation for promotion of the employee to the next grade. Advancement from one grade to the next is not an automatic process. The regulations require that to advance from one grade to another the employee has to apply for promotion. The application is made at the same time as the performance evaluation and is considered by a committee, mainly composed of “senior officers”. Points that are taken into consideration by the committee include the appraisal of the applicant (e.g., what duties the employee carries out), the report of the head of department, and the availability of funds (for the new, better paid, job).

From the description of the promotion procedure two points can be inferred. First, the quality of one’s relationship with the head of the department may be vital in the promotion decision. For a promotion to be granted the head of the department must be in agreement. Second, earlier “exposure” (e.g., being known) to senior administrators could affect the outcome of a promotion consideration. The implication is that mentoring and networking (along with their antecedents, such as certain personality traits) affect

promotions, hence, objective career success. Another implication is that certain personality traits (e.g., Tough-Mindedness, which is related to decisiveness) may have direct effects on objective career success because they may be related to assertiveness in seeking and applying for promotion.

There is an alternative way in which an employee can gain a promotion. This is by knowing about a job opening at a higher grade in the same or another department. All the Universities have implemented equal opportunities policies. When a post becomes vacant it is advertised internally, first, and maybe externally at a later stage. Hence, information about job openings can enhance objective career success. The implication is, again, that networking and mentoring can affect the likelihood of being informed about a job opening, and, in turn, the likelihood to be promoted, hence, objective career success.

### 6.3.2 MEASURES

*Objective career success* was measured as the number of promotions since joining the organisation. Number of promotions was calculated as the difference between current minus initial grade. Statistical control for starting grade and tenure was imposed in the analysis stage. Number of promotions are valid indices of objective career success (e.g., O'Reilly & Chatman, 1994; Forbes & Piercy, 1991). Use of measures which are functions of the hierarchical position (e.g., number of promotions, current grade) is recommended when objective career success in a single organisation is considered (Cox & Harquail, 1991; Melamed, 1995a). Functions of salary, occupational groupings or "rough" hierarchical classifications based on scope of responsibility are more appropriate in cases where heterogeneous samples are employed (e.g., Melamed, 1994a; 1995a; Schner & Reitman, 1995). Furthermore, in the organisations employed in the present work salary is linearly related to grade, which seems to be the case in the public service sector in general (e.g., Melamed, 1995b). Therefore, in the present case, initial grade, current grade and number of promotions are a very good index of initial salary, current salary and increase in salary since starting working for the organisation. This can lead to the avoidance of within samples discrepancies across indices of objective career success, a phenomenon that can be present when financial rewards are not tied up to hierarchical

level. In such cases, differential relationships between the former and the latter with predictor variables (e.g., mentoring) can be observed (e.g., Aryee, *et al.*, 1996; Whitely & Coetsier, 1993). Such differences have been attributed to methodological (i.e., operationalisation) problems rather than to substantive reasons (Whitely & Coetsier, 1993).

An additional measure of objective career success was used in the investigation of gender differences: current hierarchical grade. This decision was made in order to compare the results of the present investigation with those of another recent investigation in gender differences on objective career success (Melamed, 1995b). Melamed (1995b) investigated gender differences in career success in a sample drawn from the general British working population and he used hierarchical level and salary as indices of objective career success.

*Subjective career success* was measured with a scale developed by Gattiker and Larwood (1986). The scale consists of 23 items in a 5-point format (1: completely disagree, 5: completely agree). Gattiker and Larwood (1986) reported Cronbach alphas ranging from .65 to .79 for the factors of the scale.

There were two concerns about the scale. First, all the items are positively stated. Therefore, the format of the scale does not control for the acquiescence effect which refers to the tendency of some of the respondents to agree with the statements regardless of their content (e.g., Crano & Brewer, 1973; Rust & Golombok, 1989). A recommended technique for protection against this effect is the use of scales which contain roughly equal numbers of positively and negatively stated items (Rust & Golombok, 1989). However, it was decided not to impose any changes of this nature (i.e., changing the content of some of the items from positive to negative) to the original scale. The decision was based on the fact that the scale has established reliability and validity as it is. Furthermore, Crano and Brewer (1973) note that although research has shown that the acquiescence effect is a real effect, the potential dangers to the validity of a scale are usually not great.

Second, the scale has been developed and used with American origin samples. Therefore, there could be problems with the intelligibility of the scale. "Language difficulty" can be a threat to the validity of a scale even when the scale is administered to



samples with the same linguistic origin, such as British and American (Crano & Brewer, 1973). To control for language difficulty the wording of the items was checked in the pre-pilot work, where some words of the original scale were replaced (e.g., the word “peers” was replaced with the word “colleagues”). Furthermore, the syntax of one of the items was changed. In particular, the item “I have my superior's confidence” was changed to “I have the confidence of my superior”. In general, however, the changes were very few and it is considered that they did not alter the semantic content of the scale. Scores on the scale were calculated by summing the raw scores in the individual items. The range of possible scores was 23 to 115. Cronbach  $\alpha$  for the present sample was .84.

*Mentoring* was measured with Dreher and Ash's (1990) scale. The scale assesses the extent of mentoring that has been experienced by the individuals in their career in the organisation they currently work. Dreher and Ash (1990) consider that the scale is a global measure of mentoring practices as it assesses the various career and psycho-social functions described by Kram (1988). Dreher and Ash (1990) report Cronbach  $\alpha$  of .95.

The original scale makes explicit use of the word “mentor” in its instructions. In the pilot work, however, it was concluded that the term “mentor”, as considered in the mentoring literature and, hence, in the present work, may not be fully intelligible to a considerable number of the respondents. Therefore, it was decided to replace it with the expression “a higher-ranking individual (this need not be limited to one person) who had advanced experience and knowledge”. A similar approach is followed by Aryee, *et al.* (1996). In addition, to improve language intelligibility, changes were made to some words contained of the original scale (e.g., the word “company” was replaced with the word “organisation”).

The scale consists of 18 items in a 5-point format (1: not at all, 5: to a great extent). Respondents are asked to consider their career history since they started working for the particular organisation and to indicate the extent to which “a higher-ranking individual ... who had advanced experience and knowledge” has provided a number of functions for them (e.g., “...has given or recommended you for assignments that increased your contact with higher level individuals”). Total scores were calculated by

summing raw scores in individual items. The range of possible scores was 18 to 90. Cronbach  $\alpha$  for the present sample was .94.

*Provision of mentoring* was measured with a scale that was developed for the purposes of the present investigation. The scale is presented on Appendix 1. The aim was to develop a brief general scale of provision of mentoring which shows reliability and validity. The scale aims to assess the extent to which the individual has provided mentoring functions to other individuals during one's career history in the particular organisation. The items of the scale were developed on the basis of the literature in mentoring (e.g., Kram, 1983; 1988) and scales assessing the experience of the individual in receiving mentoring (e.g., Dreher & Ash, 1990; Noe, 1988a; Whitely, *et al.*, 1988). A number of editions, with various contents and formats, were developed. The final choice was made in the process of the pre-pilot work. The scale consists of 6 items and asks the respondents to indicate the extent to which in their career history with the organisation they have provided a number of mentoring functions (e.g., "...whom I have consistently provided emotional support") for "at least one subordinate". The response format was 5-point (1: not at all, 5: to a great extent); so it was consistent with the other scales used in the study. Raw scores on the scale were calculated by summing the scores in individual items. The range of possible scores was 6 to 30. Cronbach  $\alpha$  was .94.

*Networking* was measured with a new scale. Most of the studies which include networking in their investigations employ scales with very few items. Furthermore, these scales are usually limited in scope (e.g., Gould & Penley, 1984; Peluchette, 1993). To illustrate, Gould and Penley's (1984) scale contained 2 items and Peluchette (1993) assessed networking in an academic environment also using a 2-item scale. Therefore, it was considered necessary to develop a longer and more general scale which captures more aspects of networking. The scale is presented in Appendix 2.

The development of the scale was based on psychologically-based literature on networking and relevant issues (e.g., peer relationships) (Brass, 1985; Kram & Isabella, 1985) and the already existing scales (e.g., Gould & Penley, 1984; Peluchette, 1993). The scale assesses intra-organisational networking, that is the extent (and composition to some degree) of networks that individuals have within the organisation they work. The scale does not assess inter-organisational networking which refers to the extent of the

individual's networks with individuals in other organisations. It was illustrated that inter-organisational networking may be important for career success in sectors where individuals change employers often, or in jobs and occupations where work accomplishment depends on contacts with individuals outside the work organisation (e.g., organisations in the private sector or sales departments), certainly not the case with the present sample. Furthermore, after discussions with the personnel managers of the Universities where the present investigation was conducted, it was concluded that a considerable number of these employees have spent significant parts of their working lives in these Universities. Contacts outside the organisation would not contribute to their performance, effectiveness, or advancement prospects, but only in very few cases (e.g., in the case of the chancellor or vice-chancellor of the University); these exceptional cases were, realistically thinking, unlikely to be included in the present sample of respondents. Therefore, if networking is related to the career success of clerical and administrative employees in these organisations it will be in terms of intra-organisational networking.

The scale asks respondents to indicate the extent of their agreement with 10 statements (e.g., "I have a network of friendships in the organisation which can help to go further my career progression"; "there are individuals in the organisation whom I consider as best friends and I share any kind of issue, professional or personal"). A 5-point response format was used (1: completely disagree, 5: completely agree). Raw scores on the scale were the sums of scores in the individual items. The range of possible scores was 10 to 50. Cronbach  $\alpha$  was .86.

*Personality* was assessed with the UK edition (Smith, 1994) of the Cattell 16PF5 (Cattell, *et al.*, 1993; Russell & Karol, 1995)<sup>6</sup>. The UK version of the 16PF5 involves changes in 36 items from the US version. The changes are of linguistic (e.g., 'movie' was replaced by 'film' and 'math' was replaced by 'Maths'); spelling (e.g., 'program' was replaced by 'programme'); or grammatical nature (e.g., "I enjoy more listening to people talk about their personal feelings than about other things" was replaced with the item "I enjoy more listening to people talk about their personal feelings more than about other things") (Smith, 1994).

The 16PF5 contains 185 items. 170 of them relate to the measurement of personality and 15 relate to the measurement of reasoning ability (factor B)<sup>7</sup>. In the

personality part of the questionnaire, respondents indicate whether a statement applies to them personally on a three-choice response format (a: true, b: ?, c: false). Scores on 15 primary personality factors (which are similar to the original factors provided by Cattell) and an additional factor labelled "Impression Management" are derived. The fifteen primary factors are the following (the letters in the parentheses refer to the codes assigned to them by the developers of the questionnaire): Warmth (A), Emotional Stability (C), Dominance (E), Liveliness (F), Rule-Consciousness (G), Social Boldness (H), Sensitivity (I), Vigilance (L), Abstractness (M), Privatness (N), Apprehension (O), Openness to Change (Q1), Self-Reliance (Q2), Perfectionism (Q3), and Tension (Q4). Five global factors (called "second-order factors" in the previous editions of the questionnaire) are yielded on the basis of scores on the primary factors. These global factors are: Extraversion, Anxiety, Tough-Mindedness, Independence and Self-Control. The primary factors which contribute to each of the global factors are (in order of heaviness of weight in the scoring equation): for Extraversion: Warmth (+), Liveliness (+), Privatness (-), Self-Reliance (-), Social Boldness (+); for Anxiety: Emotional Stability (-), Apprehension (+), Tension (+), Vigilance (+); for Tough-Mindedness: Sensitivity (-), Openness to Change (-), Abstractness (-), Warmth (-); for Independence: Dominance (+), Social Boldness (+), Openness to Change (+), Vigilance (+); for Self-Control: Rule-Consciousness (+), Perfectionism (+), Abstractness (-), Liveliness (-) (signs in parentheses indicate positive or negative relationship with the corresponding global factor). According to the editors of the Cattell 16PF5: high scores on Extraversion indicate sociability, social participation and outgoingness; high scores on Anxiety indicate perturbation and tendency to experience negative emotional states; high scores on Tough-Mindedness indicate lack of receptiveness to new experiences and ideas and a high degree of resolution; high scores on Independence indicate social forcefulness and persuasiveness, but also, to a lesser extent, nonconformism and disagreeableness; high scores on Self-Control indicate rigidity, inflexibility and lack of spontaneity in social behaviour (Russell & Karol, 1995). Description of the characteristics associated with each of the primary and the global factors, and the formulas for the estimation of the scores on the global factors on the basis of the secondary factors, are provided in Appendix 3.

The five global factors were used in the present work. Some authors consider that the primary factors provide better predictions than the fewer global factors, this suggestion not being limited to the 16PF, but referring to all personality assessment instruments (e.g., Cattell, 1994; Mershon & Gorsuch, 1988). However, use of the global factors instead of a considerably greater number of primary factors provides parsimony in the interpretation of the results and the development of relevant models (e.g., Costa & McCrae, 1989; Goldberg, 1993). Furthermore, use of the primary factors instead of global factors is especially recommended in cases of instruments where the global factors have poor factor structures; this recommendation is rather relaxed in cases of instruments where the global factors are factorially well defined (Cattell, 1994), which seems to be the case with the Cattell 16PF, including the last edition (16PF5).

Respondents' raw scores on the primary factors were transformed to Sten scores (standardised ten scores) using the table of norms for the British general population for non-manual occupations (Smith, 1994, p. 29). Scores on global factors were calculated on the basis of the scores on the primary factors using the formulas provided by the test's manual (Russell & Karol, 1995) <sup>8</sup>. Sten scores for the global factors include decimal numbers and they may receive values below 1 and above 10. The developers of the questionnaire propose use of those scores as they are (Russell & Karol, 1995).

*16PF5 and the previous editions of the 16PF.* The compatibility of the 16PF5 with the previous forms of the Cattell 16PF is a very important issue. Compatibility means that results obtained with the use of the 16PF5, including the results of the present work, can be discussed on the basis of research which has employed previous editions of the 16PF (e.g., Melamed, 1995b; 1996b). There is some controversy, however, over the issue of compatibility between the 16PF5 and the previous editions of the Cattell 16PF. According to its developers (Cattell, 1994; Conn, 1994; Russell & Karol, 1995), the factor structure of the 16PF5 corresponds to the factor structure of the previous edition [16PFA (Cattell, Eber & Tatsuoka, 1970)]. The only considerable discrepancy is reported to be that between the 16PFA and 16PF5's fifth global factor, Tough-Mindedness (Russell & Karol, 1995).

On the other hand, it has been pointed that the factors of the 16PF5, primary and global, should not be considered equivalent to the corresponding factors of the 16PFA

and by extension, to all the previous editions of the questionnaire (Barrett & Paltiel, 1995). Barrett and Paltiel (1995) based their point on the comparison of the factor structures of the 16PF5 and 16PFA across six sets of data, in which concluded that only the factors Extraversion and Anxiety were “consistently similar” across data sets. They noted that the remaining factors could be considered similar, but not equivalent (Barrett & Paltiel, 1995). In contrast, Terpylak and Schuerger (1994), using the 16PF5, reported that they replicated exactly the correlation patterns between the global factors of the 16PFA and the Millon Personality Disorder Scales which were reported by DeLamatre and Schuerger (1992). Nevertheless, it has been pointed out by the UK publishers of the 16PF5 that direct interchangeability between some of the 16PF5’s primary factors and some the 16PFA’s primary scales should be considered with caution (Smith, 1994). Therefore, the possibility for a non-perfect correspondence between the global factors of the 16PF5 and the previous editions of the 16PF must be kept in mind.

*Cattell 16PF and the Big-Five:* An important point regarding the choice to use the Cattell 16PF5 is that its five global factors seem to correspond to the Big-Five personality dimensions (Conn, 1993; Conn & Rieke, 1994; Russell & Karol, 1995; Schuerger, 1995; Terpylak & Schuerger, 1994). As already noted, the correspondence between the 16PF5’s global factors and the Big-Five factors is as following: Extraversion - Extraversion, Anxiety - Neuroticism, Tough-Mindedness - Openness (-), Self-Control - Conscientiousness, Independence - Agreeableness (-) (e.g., Conn & Rieke, 1994; Terpylak & Schuerger, 1994). The correspondence is not exclusive; for instance, the Independence global factor for the 16PF5 also strongly relates to Assertiveness, one of the six Extraversion facets of the NEO PI-R (Conn & Rieke, 1994). The NEO PI (Costa & McCrae, 1985; 1989; 1992) is the most utilised measure of the Big-Five in recent work. However, the degree of relationship is considered to be satisfactory enough to enable the use of the 16PF5 global factors as descriptive of the Big-Five factors (of course, keeping in mind the limitations).

*Reliability and Validity of the 16PF5:* Test-retest reliability coefficients are not reported for the UK version of the 16PF5. For the original US version of the 16PF5, Conn (1994) reports test-retest reliability coefficients for the global factors that range from .84 (Independence) to .91 (Extraversion) for a two-week test-retest interval, and

from .70 (Anxiety) to .82 (Tough-Mindedness) for a two-month test-retest interval. Due to the fact that the global factors are linear combinations of the primary factors with different weights, internal consistency reliability coefficients for the global factors cannot be estimated. Smith (1994) reports Cronbach alphas for the primary factors of the UK edition of the 16PF5 on a range from .60 (Vigilance) to .87 (Social Boldness) with a mean of .72 (mean calculated by the author of the present work). Reported Cronbach alphas for the primary factors of the US edition of the 16PF5 extended over a range of .64 to .85 with a mean of .74 (Conn, 1994). The reliability indices for the primary and the global factors of the inventory are presented in Appendix 4.

The 16PF5 demonstrates validity as a measure of personality. It has been developed on the basis of the previous editions of the Cattell 16PF (e.g., Cattell, 1950; Cattell & Eber, 1957; Cattell & Stice, 1962; Cattell, Eber & Tatsuoka, 1970) which have face and content validity. Furthermore, the 16PF5 demonstrates construct and criterion validity. Its factors, primary and global, relate to the Big-Five factors. The 16PF5 also demonstrates relationships with other measures of personality: (1) both primary and global factors of the 16PF5 relate in the expected directions to Jackson's (1989) Personality Research Form (PRF) (e.g., 16PF5's global factor Tough-Mindedness is negatively related to PRF's "Change and Understanding" scale) (Conn & Rieke, 1994); (2) both primary and global factors of the 16PF5 correlate in the expected directions with the dimensions of the California Personality Inventory (CPI) (e.g., scores on 16PF5's Extraversion are strongly related to scores on CPI's Sociability, Social Presence, Self-Acceptance and Empathy scales; scores on 16PF5's Self-Control are strongly related to scores on CPI's Self-Control, Good Impression, Responsibility and Achievement-via-Conformance scales) (Conn, 1993; Conn & Rieke, 1994); (3) scores on 16PF5's Extraversion correlate strongly with scores on Extraversion (+) and Introversion (-) of the Myers-Briggs Type Indicator (MBTI) (Conn, 1993; Conn & Rieke, 1994); (4) scores on the primary and global factors of the 16PF5 correlate in the expected directions with scores on measures of self-esteem [e.g., scores on Extraversion and Independence showed strong positive correlations whilst scores on Anxiety showed a strong negative correlation with scores on Coopersmith's (1981) self-esteem inventory (Rieke & Conn, 1994)]; (5) scores on both primary and global factors of the 16PF5 were found to

correlate in the expected direction with scores on indices of social skills (e.g., scores on Extraversion were found to be strongly related to scores on five out of the six social skills indices and the total social skills index measured by Riggio's (1989) social skills inventory) (Rieke, Conn & Guastello, 1994); (6) scores on the primary factors which contribute to the 16PF5's global factor Anxiety (i.e., Emotional Stability, Apprehension, Tension and Vigilance) were strongly related in the expected direction to scores on Bell's adjustment inventory (Bell, 1961) (Rieke & Conn, 1994); (7) finally, correlations in the expected directions between scores on the global factors of the 16PF5 and scores on the personality disorder factors of Millon's Clinical Multiaxial Inventory (Millon, 1982) were found in a non-clinical sample (e.g., strong negative correlations between scores on Extraversion and scores on Schizoid and Avoidant scales of Millon's inventory) (Terpylak & Schuerger, 1994). A full presentation of work which investigated relationships between the factors of the 16PF5 and other measures of personality is outside the scope of this work. However, the above brief presentation of some relevant findings illustrates that the 16PF5 demonstrates construct validity as a measure of personality.

*Work Involvement* was assessed with a 4-item scale which includes items from the Lodahl-Kejner scale (Lodahl & Kejner, 1965). The scale has been extensively used and validated across occupations and cultures (e.g., Aryee, *et al.*, 1996; Moser & Schuler, 1993). This 4-item scale has been being used by a number of authors (e.g., Jaskolka, *et al.*, 1985; Rabinowitz & Hall, 1977). The scale asks respondents to indicate their level of agreement or disagreement with four positively stated items (e.g., "the major satisfactions in my life come from my work") in a 5-point format (1: disagree completely, 5: agree completely). Raw scores on the scale were the sums of scores in individual items. The range of possible scores was 4 to 20. Cronbach  $\alpha$  for the present sample was .79.

*Class of social origin* was assessed with a single item. Respondents indicated the socio-economic level of their family when they were at the age of 15 (upper class, upper-middle class, middle class, working-middle class, working class). This type of measure has been found to be highly associated with other measures of socio-economic origin (e.g., father's educational level) (Dreher, *et al.*, 1985; Pfeffer, 1977). In addition, it is



compatible with Cotton's (1994) observations and recommendations regarding the use of social class as a variable in organisational behaviour research. Cotton (1994) suggests that a complete definition of social class includes the notion that individuals are aware of their own social class and the other classes outside their own social class.

*Education:* Information about educational attainment was obtained with a single item. Respondents were asked to indicate all the educational qualifications they had obtained, choices starting from GSE and ending with postgraduate degree. The highest level of educational attainment was used in the analysis. The responses were coded as follows: 1: CSE, O' levels/GCSE; 2: A-levels; 3: Diploma (e.g., B.Tech.); 4: Bachelor's Degree; 5: Postgraduate Degree.

*Marital Status:* Information about marital status was obtained with a single item. Respondents were asked to indicate whether they were single, cohabiting, or married. For the analysis the coding was 1 for single, 2 for cohabiting and 3 for married.

Information about *gender* (coded 1 for male and 2 for female) and *date of birth* was obtained by single items.

*Organisational Career Details:* Information about career after joining the organisation was obtained in a section which was developed after considering the hierarchical system in each institution. This information was used in the objective career success measure(s). The section was developed on the basis of written information about the hierarchical structure for clerical and administrative employees. The personnel manager in each institution was asked to comment on its content. After that one employee from the personnel department of each institution, who was dealing with the employment statistics (therefore, being familiar with the hierarchical system of the organisation), was asked to comment on both the content and, especially, the intelligibility of the section. The final edition of the section incorporated all comments. The respondents were asked to provide information regarding the date they joined the organisation as employees; formal job title; current and initial grade; scale within grade; current and initial department of work; type of job (e.g., technical, administrative, clerical/secretarial); and number of employees they were responsible for.

The sections which included the questions regarding personal and career information were placed last in the questionnaire. Presentation of the demographic

questions at the end positively affects response rates in workplace surveys (Roberson & Sunstrom, 1990).

The complete questionnaire that was sent to the respondents is presented in Appendix 5.

#### 6.4 EXPECTED RELATIONSHIPS AND GENDER DIFFERENCES

The following expectations were formed regarding the pattern of relationships:

(1) Objective career success and subjective career success will be strongly and positively associated. The suggestion in the literature is that objective career success exerts effects on subjective career success (e.g., Turban & Dougherty, 1994). Therefore, a causality relationship from objective career success to subjective career success is expected to be identified.

(2) Mentoring and networking will be strongly and positively associated. A positive path from mentoring towards networking is expected to be identified. The decision to develop the mentoring-networking path as being initiated by mentoring is considered in the following paragraphs.

One line of consideration could be that when the individual starts working for an organisation (or has moved to a new department in the same organisation) the formation of relationships with colleagues should start prior to the development of a relationship with a mentor. Furthermore, networking is much more common; virtually all employees should have a network of contacts in their work organisation, however limited it is. Although peers are almost always available mentors are rarer (Kram & Isabella, 1985). Therefore, it would be reasonable to consider that networking should form the “baseline” of one’s relationship constellation in the work place, with mentoring relationships developing later, if at all. According to this consideration, it should be networking from which the paths in the causal path models initiate.

It was eventually decided, however, to consider the mentoring-networking path as being initiated from mentoring. The organisational context in which the investigation was conducted was taken into account in this decision. Nonetheless, it is considered that this reasoning, which follows, should be applicable to most organisational environments.

Individuals who join the present organisations as clerical or administrative employees are assigned to a superior to whom they are accountable. On the other side, the superior is “responsible” for them. Therefore, if a mentoring relationship develops it is likely to be between the employee and the superior (who sometimes is the head of the department). Furthermore, and most importantly, this superior is the person with whom the employee has the first contacts. Therefore, it is most likely that this superior will be potentially the first individual with whom a developmental relationship will develop. Of course, there is no certainty that such a developmental relationship will develop. Furthermore, if a mentoring relationship develops, it may be with another individual of higher status apart from the “formal” superior. The vital point, however, is that, in temporal terms, the (likelihood of) initiation of a relationship with a mentor should be placed prior to the (likelihood of) initiation of relationships with colleagues. After this point, the development of a relationship with a mentor may help in the development of one’s network (Dreher & Ash, 1990). For instance, other individuals in the workplace may approach the focal employee to benefit from the expertise she/he had developed about particular issues with the help of the mentor. Or, the mentor may introduce the focal individual to others who are included in the network of the mentor. Mechanisms through which a relationship with a mentor can enhance one’s network have been described earlier.

The above reasoning was supported by the content of the discussions that were made with a number of University personnel officers. Most of them, when asked to make suggestions about any causality patterns in the relationship between networking and mentoring, expressed opinions that followed the same line of reasoning to that described in the above paragraph.

(3) Networking will be positively and strongly associated with objective career success. Networking will be also positively associated with subjective career success. Therefore, positive causal paths from networking towards objective career success and subjective career success are expected to be identified.

(4) Mentoring will be positively associated with subjective career success. Mentoring will be also positively associated with objective career success. Positive

causal paths from mentoring towards objective career success and subjective career success are expected.

(5) (a) Provision of mentoring and subjective career success will be positively associated. A positive association is also expected in the case of the relationship between provision of mentoring and objective career success. Positive causal paths from provision of mentoring towards objective career success and subjective career are expected to be identified. (b) Provision of mentoring and scores on mentoring will be positively associated. A causality relationship stemming from mentoring towards provision of mentoring is expected to be identified. A positive association between provision of mentoring and networking is expected, hence, a positive causal path from networking towards provision of mentoring is expected, but with less certainty, because of the lack of relevant literature.

(6) Characteristics that are associated with high levels of Extraversion include warmth to others, spontaneity, social boldness, group-orientation and forthrightness (Russell & Karol, 1995). A positive association between Extraversion and networking is expected and a positive causal path from Extraversion towards networking is expected to be identified. Furthermore, positive associations between Extraversion and mentoring and provision of mentoring, hence positive causal paths, are expected.

(7) Characteristics that are associated with Anxiety include emotional instability, suspiciousness, tension, apprehension and self-doubt (Russell & Karol, 1995). Anxiety is expected to have an inverse relationship with subjective career success. A negative causal path from Anxiety towards subjective career success is expected to be identified.

(8) Characteristics that are associated with Tough-Mindedness include resolution, objectivity and solution-orientation, but also a lack of openness to the new and an emotional detachment from others (Russell & Karol, 1995). (a) Tough-Mindedness is expected to positively relate to objective career success. A positive causal path from Tough-Mindedness towards objective career success is expected to be identified. (b) Tough-Mindedness, however, is expected to demonstrate an inverse relationship with mentoring and provision of mentoring. Therefore, negative causal paths stemming from Tough-Mindedness towards mentoring and provision of mentoring are expected to be identified.

(9) Characteristics that are associated with Independence include lack of cooperativeness, forcefulness, thick-skinnedness, and suspiciousness (Russell & Karol, 1995). Therefore, Independence is expected to relate in the negative direction to mentoring and networking. Negative causal paths from Independence towards mentoring and networking are expected to be identified.

(10) (a) No systematic relationship between Self-Control and mentoring and networking is expected. It is reasonable to expect that high degrees of Self-Control should inhibit the initiation of relationships with others in the organisation because some of the characteristics that are associated with Self-Control include seriousness, caution and carefulness (Russell & Karol, 1995). The suggestion, however, is that mentors tend to have a preference for providing mentoring functions to subordinates who perform well and are involved in their work and that organisational members prefer to associate with colleagues who are perceived to be high performers (Feren, *et al.*, 1988; Kram, 1985; Olian, *et al.*, 1993). Research in the area of subordinate influence suggests that behaviours related to “favour doing” increase the liking of the subordinate by the superior (Liden & Mitchell, 1988). Self-Control must relate to the exhibition of such behaviours (e.g., willingness to “do the extra mile”), regardless of their intention, because some other characteristics that are associated with Self-Control include self-discipline, organisation and dutifulness (Russell & Karol, 1995). Furthermore, research does suggest that Self-Control (conscientiousness) is positively related to contextual job performance (e.g., Hough, 1992). It is, therefore, likely that the negative effects of Self-Control on the initiation of mentoring relationships and on networking to be counterbalanced by the positive effects of Self-Control on work performance and on the impressions on superiors and colleagues. (b) No relationship between Self-Control and objective career success is expected to be identified. Behaviours that are associated with dutifulness, organisation, self-discipline and perfectionism are valued in the organisational environment and are associated with job performance (e.g., Barrick, *et al.*, 1993). On the other hand, however, work performance should not be considered a valid indicator of objective career success (Cannings & Montmarquette, 1991; Schneider & Hough, 1995).

According to the above expectations, the causal paths to be identified should, in general, conform to the model that is pictured in Figure 1. Not all of the paths may be identified. However, the paths which will be included in the causal models should also be present in Figure 1.

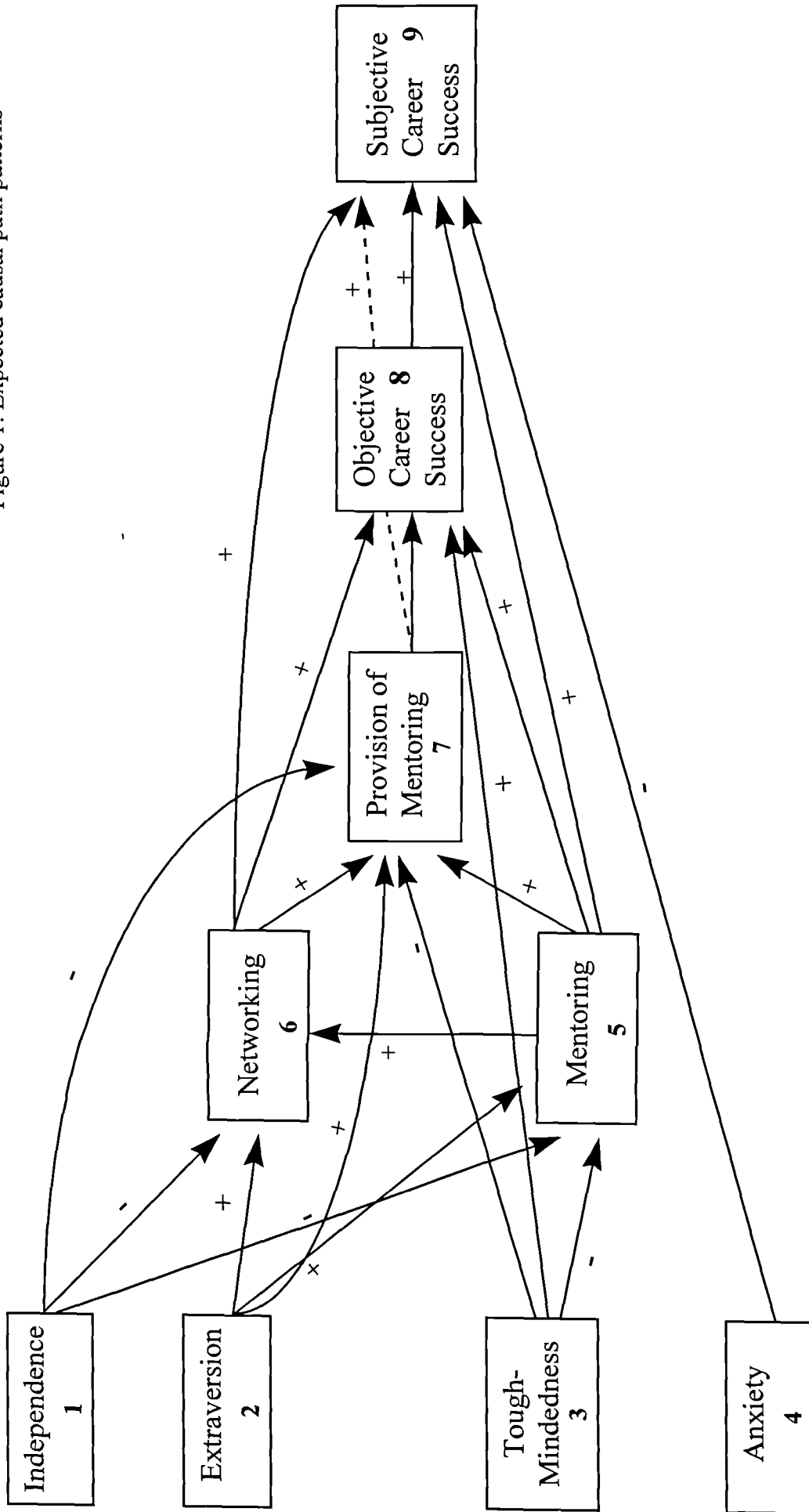
The above hypotheses refer to the general pattern of the results. However, it is likely that the patterns for each gender are different because behaviours stemming from identical personality traits (e.g., Independence, Tough-Mindedness) can be interpreted in a different light, depending on whether they are exhibited by men or women (e.g., Cannings, 1988).

Regarding gender differences, the expectations are the following:

Women are expected to report higher scores on mentoring and higher scores on networking. Regarding provision of mentoring, the expectation is the same. To provide mentoring an employee must be at a sufficiently high organisational level. In the organisations employed in the present investigation the numbers of men and women in middle and high organisational levels are balanced. Furthermore, the lower organisational levels are dominated by women, offering potential women mentors more latitude to offer mentoring functions to same-gender subordinates. However, from a number of discussions with the personnel officers in these organisations and from documentation provided by the personnel departments, it was suggested that rather “recently” women have “ascended” (or been hired externally) to relatively high organisational levels. For this reason, there are some reservations regarding the expectation for a gender difference in reception and provision of mentoring in favour of women.

It is not expected that women will be found to be higher in the objective career success indices. The opposite would be more realistic. This expectation holds despite the fact that mentoring and networking are expected to relate to objective career success, and women are expected to report higher scores on these variables. Research indicates that even when a considerable number of factors which relate to indices of objective career success are controlled, men are found to be higher in objective career success (e.g., Cox & Harquail, 1991; Melamed, 1995b; Olson, *et al.*, 1987). Women, however, are expected to report higher scores on subjective career success than their male counterparts. The reasoning for this expectation, which revolves around social norms and socialisation, has

Figure 1: Expected causal path patterns



been presented. The expectation for an inverse pattern in gender differences in objective and subjective career success is also in line with empirical research (e.g., Cox & Harquail, 1991; Schneer & Reitman, 1990). In the next section, the procedure, including the pilot work, for the data collection is presented.

## 6.5 PILOT WORK AND DATA COLLECTION

### *Pre-Pilot Work 1*

The scales were given to three academics who were specialists in occupational psychology. They were asked to comment on the content, form and language of the scales. On the basis of their comments some changes were made. In general, however, the academics found the scales adequate. This procedure was considered especially important in the case of the newly developed scales for networking and provision of mentoring. After this, the scales were presented to a number of doctoral students in the field of Psychology, who were native speakers of the English language. They were asked to comment on the intelligibility of the scales. Some modifications were also made on the basis of their comments. A sample of these modifications has been presented in the sections where the measures that were used in the present work were described.

### *Pre-Pilot Work 2*

The whole questionnaires were presented to a small number of administrators and clerical workers. They were requested to complete them and comment on any intelligibility problems. After this, the questionnaires were given to the head of the personnel office in each institution who were requested to comment on their validity and, especially, intelligibility. At this stage, special emphasis was given to the career demographics section. It was important to ensure that the respondents would be able to understand, and hence provide valid responses to, the items regarding their starting and current hierarchical levels. After the completion of this stage, it seemed that no significant intelligibility problems should arise in the completion of the questionnaires by the respondents.



The pre-pilot work was considered to be important for the development of the scales which assess networking and provision of mentoring as it is suggested by a number of authors (e.g., Rust & Golombok, 1989). Furthermore, it was proved valuable in the development of the sections which assessed career demographics and personal information (e.g., socio-economic background). To illustrate, following suggestions made by the personnel officer of one of the institutions, the term “working class” was used instead of the initially chosen “low class” in the item that measured class of social origin. This has probably protected against bias and offensiveness of the item (e.g., Rust & Golombok, 1989).

### *Pilot work*

Thirty three questionnaires were sent to a randomly chosen sample of employees in one of the three Universities. The employees were randomly selected from the list that was provided by the personnel office of the University. The list provided the name and the internal address of the clerical and administrative employees of the University. The internal mail of the University was used. A two-week deadline for reply was given. Thirteen questionnaires were returned which corresponds to a response rate of 39%. This response rate was considered very satisfactory taking into account the length of the battery (six pages with attitude/career/demographic questions and the 185-item Cattell 16PF5).

As the intelligibility of the scales had been already assessed in the pre-pilot work the main purpose of the pilot study was to conduct item analysis (e.g., Nunnally, 1978; Rust & Golombok, 1989). It was decided in advance that no item from the already existing scales (e.g., subjective career success) to be eliminated on the basis of low spread of responses (e.g., spread over one or two points). This decision was based on the fact that the scales had been already used by other researchers and seemed to have established reliabilities and validities. However, it was decided that items from the newly developed scales (networking and provision of mentoring) could be eliminated on the basis of one or a combination of factors: (i) a very low spread of responses; (ii) a facility index which approached an extreme value (i.e., 1 or 5); (iii) an item-total correlation below .2, following Rust and Golombok's (1989) suggestion. The facility index was

calculated as the ratio of the sum of the respondents' scores on each item to the total number of respondents (Rust & Golombok, 1989). These criteria are related to item facility and item discrimination, two of the fundamental item analysis procedures (e.g., Rust & Golombok, 1989). Item analysis statistics for the final networking and provision of mentoring scales are presented in Table 1.

Networking scale: Most of the items had ranges extending to four or five points. Only item number seven ("I keep in touch with a number of people in the organisation who are at higher levels than I am") had a response range of three points. The facility indices had a range from 2.18 (items eight and ten) to 3.73 (item two). None of these indices approached the values of 1 or 5, which would recommend a low discriminating value for the item. Finally, the range of item-total correlations extended from .24 for item five ("I have a network of contacts for obtaining information about what's happening in the organisation") to .69 for item seven. Therefore, it was decided all the items to be included in the scale that was used in the main part of the study.

Provision of mentoring: All items had response ranges extending to five points. Exceptions were item number one ("in my career history in this institution there has been at least one subordinate to whom I have consistently given challenging assignments") and item number two ("in my career history in this institution there has been at least one subordinate whom I have introduced to higher level individuals"). They had response ranges of four points. The facility indices ranged from 1.91 (item one) to 2.63 [item four ("in my career history in this institution there has been at least one subordinate to whom I have given advice concerning his or her career") and item five ("in my career history in this institution there has been at least one subordinate I was personally interested in his or her professional development")]. Item-total correlations extended over a range from .62 for item three ("in my career history in this institution there has been at least one subordinate whom I have consistently provided emotional support") to .95 for item five. On the basis of these results it was decided to keep all the items in the scale [the low facility index for item one (1.91) was not very near 1; furthermore, its spread of responses (four) and item-total correlation (.77) were satisfactory].

Other scales: All the items in the scale which assesses mentoring had ranges of responses extending to four or five points. Only items 3 and 4 had response ranges

Table 1: Item analysis statistics for the final scales of networking and provision of mentoring (results are based on the pilot work ( $n = 13$ )).

	Response Range	Facility index	Item-total
<i>There are individuals in the organisation...</i>			
1...with whom I exchange information concerning what's happening in the organisation.	2 - 5	3.55	.46
2...with whom I frequently talk about work related topics	2 - 5	3.73	.51
3...with whom I share emotional support, feedback and work confirmation.	2 - 5	3.55	.59
4...whom I consider as best friends and I share any kind of issue, professional or personal.	1 - 5	3.36	.55
5. I have a network of contacts for obtaining information about what's happening within the organisation.	1 - 4	2.91	.24
6. I have a network of friendships in the organisation which can help to further my career progression.	1 - 4	2.27	.37
7. I keep in touch with a number of people in the organisation who are at higher levels than I am.	1 - 3	2.27	.69
8. I personally know a number of people who occupy important posts in the organisation.	1 - 4	2.18	.26
9. I personally know a number of people who work in other departments of the organisation.	1 - 5	2.45	.47
10. I personally know a great number of people in the organisation.	1 - 5	2.18	.39
<i>In my career history in this institution there has been at least one subordinate...</i>			
1... to whom I have consistently given challenging assignments	1 - 4	1.91	.77
2... whom I have introduced to higher level individuals	1 - 4	2.	.74
3... whom I have consistently provided emotional support	1 - 5	2.55	.62
4... to whom I have given advice concerning his or her career	1 - 5	2.63	.93
5... I was personally interested in his or her professional development	1 - 5	2.63	.95
6... I was personally interested in his or her career	1 - 5	2.55	.90

extending over three points. In the scale assessing subjective career success, items 1, 3, 5, 6, 10, 11, and 13, had response ranges of three points. Furthermore, items 16, 19, 20, and 22, had response ranges of two points. Responses on all items in the work involvement scale had a range of three points. Under the rationale described above, no item was eliminated from any scale.

### *Procedure*

The internal mail of the Universities was used for the distribution of the questionnaires. Each envelope contained the questionnaires, a self-addressed free-post envelope for the return of the questionnaires, instructions for the completion, and a cover letter. In the cover letter the nature of the study was briefly explained asking for participation. Feedback (i.e., personality profile and information comparing the respondents with the general British white-collar workforce) was promised. Effort was made so the questionnaires to reach the employees either on a Thursday or a Friday (the questionnaires were made available to the relevant personnel departments on a Wednesday afternoon; it was promised by them that the envelopes would be internally mailed immediately). Previous research experience of the author has suggested that distribution of questionnaires at the end of a working period is likely to increase response rate (Bozionelos, 1994).

One thousand fifteen hundred (approximately) questionnaires were sent. Questionnaires were also sent to a number of employees working on a part-time basis. The labels with the names and the internal addresses of the targeted employees were provided by the personnel department of each of the Universities. Labels with the addresses of all individuals who were employed in clerical/administrative posts, on a full-time or on a part-time basis, were provided. The author had no way of distinguishing full-timers from part-timers on the basis of the information on the address labels.

Three hundred and seventy six responses were received. This corresponds to a response rate of 25.1%. Taking into account the length of the questionnaires, the response rate is considered satisfactory. Of these responses, three hundred and forty two were considered usable. Non-usable questionnaires had omissions in the completion of sections, or pages, or there was a failure to report vital information about current and/or

initial positions in the organisation. Furthermore, questionnaires returned by individuals employed on a part-time basis were considered as non-usable for the purposes of the present investigation.

## **CHAPTER 7: ANALYSIS AND RESULTS**

## CHAPTER 7. ANALYSIS AND RESULTS

### 7.1 SAMPLE PROFILE

Two hundred and seventy two (199 women and 73 men) out of the three hundred and forty two usable responses were included in the analysis. Two criteria had to be satisfied for a response to be included in the analysis. The first criterion was the respondent's tenure to be equal to or greater than 2 years. The imposition of this criterion was considered necessary for the validity of the results. The suggestion of relevant research is that at least two years are needed for a mentoring relationship to fully develop (e.g., Kram, 1983; 1988). Similarly, it is considered that a certain amount of time is needed for an individual to start developing a network of relationships with others in a work organisation. Finally, research suggests that a certain amount of time is needed for any relationship between personality and work or career outcomes to become evident (e.g., Dodd, Wollowick & McNamara, 1970; Helmreich, Sawin & Carsrud, 1986). The second criterion was that the grade in which the respondent joined the organisation should be lower than the highest possible grade (grade 11). Individuals who join the organisation at the highest level cannot achieve any promotions. Inclusion of these individuals in the analysis could bias the main criterion (number of promotions) which was used for the operationalisation of objective career success.

Descriptive statistics for all the respondents regardless of gender and by gender are presented in Tables 2 and 3, respectively. The sample can be described as consisting mainly of individuals in their mid-life stages and in their early to middle career stages. 78.1% of the respondents were below 45 years of age; according to Hall's (1976) model, they were in the exploration or establishment stage of their careers, the majority of them being in the establishment stage (25 to 45 years of age). Only 1.5% of the respondents were in the decline stage according to Hall's (1976) model (i.e., above 60 years of age). It could be considered that most of the respondents were in their early-middle career stages within their work organisation. Around three fourths (73.5%) of the respondents reported less than 10 years of tenure and only 9.2% of the respondents indicated tenure above 15 years. The level of education was moderate to high. About three fourths (74.3%) of the respondents reported educational level of at least A-levels or equivalent. More than one third (36%) of the respondents reported holding higher education qualifications, with 15.4% of the respondents also holding postgraduate degrees. The class of social origin can be described as working to middle class, with 74.6% of the respondents indicating "working" or "working-middle" class in their responses. Only 4.4% of the

Table 2: Means, standard deviations and ranges ( $n = 272$ ).

Variable	<i>M</i>	<i>SD</i>	<i>range</i>
Age	36.2	9.9	20 - 63
Education	3.2	1.1	1 - 5
Social class	1.9	.9	1 - 4
Marital status	2.1	.9	1 - 3
Tenure	7.6	6.1	2 - 37
Number of subordinates	3.4	7.5	0 - 55
Grade	4.7	2.3	1 - 11
Promotions	1.8	1.7	0 - 9
Mentoring	50.6	15.7	18 - 85
Provision of Mentoring *	19.4	6.7	6 - 30
Networking	32.8	8.3	10 - 50
Subjective Career Success	76.5	12.2	43 -104
Work Involvement	8.5	3.2	4 - 19
Extraversion	5.93	1.92	1.1-10.5
Anxiety	5.48	1.95	.3-10.4
Tough-Mindedness	5.06	1.59	.5-10.2
Independence	5.22	1.70	.8- 9.7
Self-Control	4.98	1.57	.6- 9.2

\*  $n = 104$  (grade greater or equal to 5).



respondents indicated class of social origin above “middle” class. About two thirds (63.3%) of the respondents were involved in a relationship which involved sharing home responsibilities, being cohabiting (16.2%) or being married (47.1%).

A higher percentage of men (52.1%) than women (45.2%) reported being married. Considering respondents in grade 5 and above, the difference in percentages widened, with 65.1% of men and 50.8% of women reporting being married. Furthermore, considering respondents in grade 5 and above, 55.8% of the men indicated having children compared with 45.9% of the women. Taking all respondents into consideration, 43.8%% of men and 41.7% of women indicated having children. The differences in percentages of married respondents and respondents who were parents between male and female respondents in grade 5 and above were not significantly different from the corresponding percentages of male and female respondents regardless of grade ( $\chi^2(1) = 1.96$ , *ns*, for marital status;  $\chi^2(1) = 1.68$ , *ns*, for being a parent). Nevertheless, the suggestion of the percentages is that, as one ascends towards middle and high grades, there is a tendency for women to be less likely than their male counterparts to be married and to have children.

The grade distribution of the respondents was the following: Grade 1: 7 (5 women; 2 men); Grade 2: 28 (23 women; 5 men); Grade 3: 61 (52 women; 9 men); Grade 4: 72 (58 women; 14 men); Grade 5: 25 (18 women; 7 men); Grade 6: 26 (15 women; 11 men); Grade 7: 12 (8 women; 4 men); Grade 8: 11 (4 women; 7 men); Grade 9: 18 (11 women; 7 men); Grade 10: 6 (2 women; 4 men); Grade 11: 6 (3 women; 3 men). In general, the ratio of women respondents to men respondents tends to decrease as the grade increases. The ratio of women to men in grades 1 to 4 is 4.6 to 1. The ratio of women to men in grades 5 to 11 is 1.4 to 1. This pattern is similar, though not identical, to the pattern that is found when the ratios of all men to all women employed on a full-time basis in clerical/administrative posts in the three organisations are considered.

## 7.2 ANALYSIS OVERVIEW

The main statistical procedures that were employed in the analysis were principal components analysis and hierarchical regression analysis. Principal components analysis was employed for the investigation of the validity of the newly developed scales and regression analysis was employed for the investigation of inter-variable relationships and gender differences. The stepwise procedure was used along with the forcible entry procedure in the regression analysis. Hierarchical regression is suited for research designs which employ sets of

Table 3: Descriptive statistics by gender.

Variable	Men ( <i>n</i> = 73)			Women ( <i>n</i> = 199)		
	<i>M</i>	<i>SD</i>	<i>range</i>	<i>M</i>	<i>SD</i>	<i>range</i>
Age	34.4	10.4	23 - 63	35.4	9.6	20 - 60
Education	3.4	1.1	1 - 5	3.2	1	1 - 5
Social class	1.9	.9	1 - 4	1.9	.9	1 - 4
Marital status	2.2	.9	1 - 3	2.1	.9	1 - 3
Tenure	8.36	7.59	2 - 37	7.36	5.4	2 - 30
Number of subordinates	3.7	7.6	0 - 50	3.3	7.4	0 - 55
Grade	5.76	2.6	1 - 11	4.35	2.09	1 - 11
Initial Grade	3.69	2.77	1 - 11	2.74	1.98	1 - 11
Promotions	2.1	2.06	0 - 7	1.64	1.58	0 - 9
Mentoring	46.55	15.51	21 - 83	52.05	15.53	18 - 85
Provision of Mentoring *	17.53	6.43	6 - 30	20.64	6.56	6 - 29
Networking	30.48	8.29	10 - 47	33.68	8.15	13 - 50
Expressive Networking	13.01	3.68	4 - 20	15.46	3.72	4 - 20
Instrumental Networking	14.51	5.03	5 - 23	14.93	4.93	5 - 25
Subjective Career Success	72.33	12.67	43 - 99	77.97	11.67	47 - 104
Work Involvement	8.19	3.09	4 - 19	8.6	3.19	4 - 19
Extraversion	5.19	1.84	.6 - 9.2	6.21	1.88	1.1 - 10.5
Anxiety	5.30	2.04	.8 - 10.4	5.55	1.91	.3 - 10.4
Tough-Mindedness	5.33	1.73	.5 - 10.2	4.96	1.53	1 - 8.4
Independence	5.53	1.74	1.3 - 8.4	5.10	1.68	.8 - 9.7
Self-Control	4.60	1.64	.6 - 9.2	5.12	1.53	.6 - 8.8

\* *n* = 43 for men and *n* = 61 for women

control variables and for this reason it has been extensively employed in research on predictors of career success (e.g., Cox & Harquail, 1991; Gattiker & Larwood, 1990).

The remainder of section 7.2 considers the appropriateness of using these procedures in the analysis of the present set of data. Section 7.3 assesses the discriminant and construct validity of the newly developed scales to measure networking and provision of mentoring. The main analysis of relationships and gender differences begins in section 7.4.

#### *The Issue of Using Ordinal Scales in Factor Analysis and Regression Analysis*

One of the requirements for factor analysis and regression analysis is that the scales are of at least interval type (e.g., Kim & Mueller, 1978; Stevens, 1946). Most authors, however, consider that even variables which are produced by ordinal scales (that is scales without a clearly established metric base) can be used without serious violation of the underlying assumptions (e.g., Asher, 1983; Kim & Mueller, 1978; 1994b). The Pearson correlation coefficient (Pearson, 1900), on which the techniques are based, is a quite robust statistic to ordinal distortions of measurement (e.g., Kim, 1975). Therefore, it is legitimate to assume that use of factor analytic and regression techniques with attitude scales, such as the networking and the mentoring scales, is justified.

#### *The choice of Principal Components Instead of Factor Analysis*

Principal components analysis, which was used in testing for the construct validity of the scales, is recommended in cases where exploration of the structure of a set of variables is attempted (e.g., Dunteman, 1994). Employment of common factor analysis for the extraction of factors, however, would be also justified in the present case because factor analysis is recommended when expectations, even general ones, concerning factor patterns exist (e.g., Dunteman, 1994; Norusis, 1993). In the present work, there were certain expectations about the number of factors that should emerge. For instance, one of the criteria for the networking scale to demonstrate construct validity was the emergence of two factors, reflecting expressive and instrumental networking.

Principal components analysis (Pearson, 1901; Hotelling, 1933) was preferred because, unlike common factor analysis (or factor analysis), it decomposes the total observed variance in the correlation matrix (e.g., Dunteman, 1994; Kim & Mueller, 1978). Factor analytic methods decompose *only part of the observed variance and the final solution may not adequately reproduce the observed correlation matrix*. Therefore, in factor analysis the fit of the factor

solution with the data has to be tested. In principal components analysis, there is no requirement for goodness of fit because the final factor matrix accounts for the total variance of each of the initial variables. In the most commonly used factor analytic methods [e.g., generalised least squares method, maximum likelihood method (Lawley & Maxwell, 1971)] the chi-square distribution is suggested for data fitting testing (e.g., Dunteman, 1994; Harman, 1976; Long, 1983; Norusis, 1993). The value of the chi-square test, however, is directly proportional to the sample size (e.g., Howell, 1987); hence, for large sample sizes even small discrepancies in fit can be proved significant (e.g., Bentler & Bonett, 1980). This can result in an indication for the need of a considerably larger number of factors than it is necessary and sensible (Harman, 1976; Norusis, 1993). Therefore, a factor solution can be rejected as not demonstrating goodness of fit even though this solution is justified on the basis of theory, rationale and other indices (e.g., conformance to the eigenvalues greater than one criterion). In fact, some authors have imposed objections to the use of the goodness-of-fit tests, such as the chi-square, which depend on the sample size as indicators of the appropriateness of the factor model (e.g., McDonald, 1975). Other authors have developed measures of goodness of fit that are based on the value of the chi-square, but not on its statistical significance (Carmines & McIver, 1981; Hoetler, 1983). Even in these cases, however, the value of the estimated statistics depends on the sample size (Brooke, Russell & Price, 1988). Taking these points into consideration, Harman (1976) suggests that the factors indicated by these kinds of goodness-of-fit tests to be used only as an indication of the upper limit of the number of factors that is appropriate. Therefore, in the present work, the relatively large sample size would probably make an emergent two factor solution not fitting the data. In order not to be found in a position where, to be sensible, a major violation of the solution dictated by a goodness-of-fit test is required, principal components analysis was preferred.

### *Regression Analysis*

The assumptions underlying the regression technique, and in particular, the least squares regression that was employed in the present work, are presented and tested with respect to the present set of data in the following paragraphs. Least squares regression is the regression technique which is mostly employed in research using regression and it is the technique whose use is normally implied with the term “regression”. The conditions to be met for least squares regression to be appropriately conducted are the following (e.g., Berry & Feldman, 1982; Cohen & Cohen, 1983; Chatterjee & Price, 1991; Draper & Smith, 1981; Pedhazur, 1982; Sen & Srivastava, 1990; Schroeder, Sjoquist & Stephan, 1986):

(1) The variables must be measured at least at the interval level and there must be no error involved in their measurement.

The first part of the condition has already been addressed. The operationalisation of objective career success as the number of promotions since joining the organisation can be assumed as conforming to the requirement of the condition, at least no less than the assumption that attitude-like scales can be considered as interval scales; however, it is acknowledged that the relationship between grade and probabilities for promotion is logarithmic.

The second part of the condition refers to the validity and reliability of the measures. In particular, non-random measurement error (e.g., due to inadequacies of the measurement instruments) refers to the validity of the measures; and random error or “unsystematic noise” mainly refers to the reliability of the instruments (Berry & Feldman, 1985).

The issue of validity is present every time that operationalisation of constructs is involved (e.g., Berry & Feldman, 1985; Nunnally, 1978; Rust & Golombok, 1989). This issue can be dealt with only in advance with the use of valid instruments. The validity of the measures used in the present work, apart from networking and provision of mentoring, has already been assessed. The validity of networking and provision of mentoring is addressed in the next section. It is noted, however, that Chatterjee and Price (1991) point that the condition for no non-random error in the measurement of the variables is extremely unlikely to be satisfied, at best.

Regarding reliability, in multivariate regression analysis lack of reliability in the criterion variable can lead to underestimation of the significance of the regression coefficients. Lack of reliability in the predictor variables can have unpredictable bias effects (i.e., inflation or attenuation) on the regression coefficients (e.g., Berry & Feldman, 1985; Greene, 1978; Pedhazur, 1982). These are issues of concern in the present work, because of the employment of the stepwise regression technique where inclusion in the final model is decided on the basis of the statistical significance of the slope coefficients. Internal consistency reliability coefficients above .80 are acceptable for attitude scales whilst reliability coefficients of .70 and above are acceptable for personality tests (e.g., Berry & Feldman, 1985; Nunnally, 1978; Rust & Golombok, 1989). All the attitude scales employed in the present work have Cronbach alphas above .80 (the work involvement scale had Cronbach  $\alpha$  .79). Furthermore, test-retest reliabilities (which are of prime concern in personality testing) for the global factors of the 16PF5 have means ranging from .78 to .87 (Russell & Karol, 1995). Therefore, progress can be made with confidence that the reliability of the measures is not an issue of concern in the present work. Regarding random measurement error from sources outside the scales (e.g., mistakes in the copy of the data), it is assumed to be randomly distributed.

(2) The relationship between the predictor variables and the criterion variable must be linear; and the relationship between any predictor variable and the criterion variable must not be contingent upon the values of the other predictor variables in the equation (linearity and additivity assumption, respectively).

The linearity assumption is fundamental to the use of the general linear model. Intuitively speaking, it refers to the assumption that the “best” regression model which can describe the relationship is linear. The problem with the linearity assumption is that it is very difficult to be tested. Specification of a highly significant linear model does not provide certainty that the “best” descriptive model is linear. Furthermore, comparison of the linear specification with non-linear ones (e.g., including polynomial, quadratic, etc. terms) is a very difficult and laborious, if not impossible, procedure. In addition, the results of this procedure are questionable. There is an infinite number of competing models and their complexity increases dramatically as the number of predictors increases (e.g., Berry & Feldman, 1985). There are some procedures which have been proposed to test for non-linearity (e.g., Berry & Feldman, 1985; Pedhazur, 1982). These procedures, however, can be used after the model has been specified. Therefore, when stepwise regression is used, where a number of variables are excluded from the final model, there is no way to compare the final model, which is the “best” linear model, with non-linear models because not all variables have been included in the final equation.

Berry and Feldman (1985) suggest that the best way to test for non-linearity is to expect non-linearity on the basis of theory and logic. There was no particular reason, though it should not be dismissed as a possibility, to expect a non-linear relationship in the relationships that are investigated. The only relationship for which there is reason to expect non-linearity is the relationship between initial grade in the organisation and objective career success (i.e., number of promotions). Presumably, the higher the grade in which one joins the organisation the lower the probability to be subsequently promoted (e.g., because of the pyramidal shape of the organisational hierarchy). A logarithmic relationship would be a logical expectation in this case. Visual inspection of the plot of initial grade against the number of promotions confirmed the expectation about a logarithmic relationship between initial grade and number of promotions. A “harder” test was subsequently conducted. Objective career success was regressed on initial grade in two ways: in a logarithmic manner (i.e., the logarithm of the predictor variable was used in the analysis) and in a linear manner. The results provided support for the expectation:  $R^2$  for the logarithmic model was .144 ( $F = 44.52, P < .001$ ) and  $R^2$  for the linear model was .112 ( $F = 33.93, P < .001$ ). Furthermore, hierarchical multiple regression, with the logarithmic values

entered after the raw values, indicated that this increment in variance was significant ( $\beta = -.53$ ,  $t = -3.3$ ,  $P < .001$ ). On the basis of this analysis, the logarithm of the initial grade was used in the regressions where objective career success was the criterion variable.

In the case of additivity or interaction between the predictor variables the situation is quite similar to that of linearity (e.g., Berry & Feldman, 1985). Therefore, this issue will be of no more concern than the issue of non-linearity.

As a final point, the possibility for non-linear relationships is not ignored or rejected. Realistically, however, given the number of regressions to be conducted in the present work and the issues presented above, there is no practical way to thoroughly test this issue, apart from logically predictable cases like that of the relationship between initial grade and number of promotions.

(3) The mean of the error term must be zero (to be mathematically precise, it must tend to be zero as the number of replications tends to become infinite). This condition concerns only the value of the intercept. Thus this assumption is of concern only when the estimation of the intercept is of importance (e.g., Berry & Feldman, 1985). This is not the case in the present work.

(4) The variance of the error term must be constant across sets of values for the independent variables (homoscedasticity assumption). When this condition is not fulfilled heteroscedasticity is present. Presence of heteroscedasticity can lead to bias in the estimations of the statistical significance of the regression coefficients. Heteroscedasticity is mostly a potential problem when cross-sectional type of data are analysed (Schroeder, *et al.*, 1986). Therefore, it is clear that heteroscedasticity can be an issue in the present work.

Heteroscedasticity can be caused by a number of factors (Berry & Feldman, 1985; Chatterjee & Price, 1991). One factor can be measurement errors in the dependent variable. The issue of measurement error has already been addressed. Heteroscedasticity is also likely to be the result of the interaction between one or more of the predictor variables and one or more variables not included in the model (Berry & Feldman, 1985; Jaccard, Turrisi & Wan, 1990). This point relates to the specification of the type of the regression model, and the linearity assumption, which has also been addressed. Therefore, the issue of heteroscedasticity, although not excluded as a possibility, has already been addressed.

In any case, however, heteroscedasticity does not have any negative effects on the tests of statistical significance, unless it is severe (Bohrstedt & Carter, 1971). It is difficult to determine what constitutes a "severe" case of heteroscedasticity. As a means for investigating for the presence of heteroscedasticity, authors recommend visual inspection of the plots of the

standardised regression residuals against the predictor variables that could be correlated with the variance of the residual (Berry & Feldman, 1985); or against the standardised predicted values of the criterion variables (Chatterjee & Price, 1991; Pedhazur, 1982). Visual inspection of the plots, as recommended by Pedhazur (1982), following the relevant guidelines for heteroscedasticity signs (Berry & Feldman, 1985; Chatterjee & Price, 1991; Pedhazur, 1982) did not give the impression that severe heteroscedasticity can be present.

(5) There must be no correlation between the error terms across observations (the assumption of no autocorrelation). Autocorrelation has effects similar to those of heteroscedasticity (i.e., bias in the estimations of statistical significance of the regression coefficients) (e.g., Chatterjee & Price, 1991; Schroeder, *et al.*, 1986). The presence of autocorrelation, however, is most likely to be found in cases where time-series data are used (i.e., multiple observations at successive points in time) (e.g., Chatterjee & Price, 1991; Draper & Smith, 1991; Ostrom, 1978; Schroeder, *et al.*, 1986). Even the tests for the presence of autocorrelation that are available [e.g., visual inspection of the data or other tests such as the Durbin-Watson statistic] (e.g., Chatterjee & Price, 1991) refer specifically to time-series data. Therefore, autocorrelation is not an issue of concern in the present work.

(6) There must be no linear relationship between any of the predictor variables (no multicollinearity assumption). There is no general consensus regarding the meaning of multicollinearity for analyses using data from the “social world” (e.g., Berry & Feldman, 1985; Pedhazur, 1982). Following literature suggestions, in the present work multicollinearity is defined as the presence of “high” correlations among the predictor variables to be used in the regression analysis. However, the size of the correlation considered as “high” is yet an issue of dispute.

The most serious effects of multicollinearity are the tendency of the t-ratios to be non-significant. This index will be employed in the present work, therefore, multicollinearity is an issue of potential concern. Furthermore, multicollinearity can be the source of problems in the appropriate specification of the multiple regression models that are derived with the use of the stepwise procedure (Hauser, 1974; Henderson & Denison, 1989). The stepwise procedure will be extensively utilised in the present work. Finally, multicollinearity is a potential problem in causal path analysis; path coefficients, that is regression coefficients, become unstable across samples, making it very difficult to draw valid conclusion regarding relative effects (e.g., Asher, 1983). Causal path analysis will also be conducted in the present work. Therefore, multicollinearity is an important issue of concern in the present work.



Some authors suggest that correlation matrices derived from large sets of data are more tolerant to the negative effects of multicollinearity (Berry & Feldman, 1985; Deegan, 1972). Berry & Feldman (1985) stress that the ratio of cases to the number of predictor variables should exceed one; otherwise multicollinearity will certainly be present. Therefore, the first step in dealing with multicollinearity is to have a sufficiently large sample size. This precaution seems to be fulfilled in the present data set. Even in the case of the smallest sub-sample to be used in the analysis (i.e., men respondents in grade 5 and above,  $n = 43$ ) the ratio of variables to cases is at the levels of one to five. Considering the work (e.g., examples provided, statistics' distribution development, etc.) of authors in the field (e.g., Berry & Feldman, 1985; Draper & Smith, 1981; McIntyre, Montgomery, Srinivasan, & Weitz, 1983; Pedhazur, 1982), ratios at this level and above should be adequate.

Apart from precautions regarding the ratios of variables to cases, a variety of techniques to test for multicollinearity have been proposed (e.g., Berry & Feldman, 1985; Chatterjee & Price, 1991; Pedhazur, 1982; Rockwell, 1975; Willan & Watts, 1978). Two of these techniques were used in the present work: visual inspection of the correlation coefficients and inspection of the eigenvalues of the principal components. The inspection was limited to the main variables in the study that were used as predictor variables in the regression analyses, namely the five personality factors, mentoring, networking, provision of mentoring and objective career success. Presence of multicollinearity among the control variables and/or in the correlations between control and main variables, though not desirable, is not considered a great danger for the validity of the conclusions. The reason for the former case is obvious, the amount of variance the control variables account for and not the way they account for is of interest. Regarding the latter, multicollinearity does not impose a threat because hierarchical multiple regression will be used. The control variables will be included in blocks that are distinct from the blocks which will include the main variables in the study. In fact, use of hierarchical regression is a method which has been proposed to deal with multicollinearity (Chatterjee & Price, 1977; Harman, 1976).

When visually inspecting for evidence of multicollinearity, the appropriate cut-off values of the correlations is still an issue to be defined (e.g., Asher, 1983). Berry and Feldman (1985) suggest that for small samples a sufficient cut-off point should be a correlation coefficient size of .70; for large samples a coefficient size of .85. Tabachnick and Fidell (1989) agree, generally suggesting coefficient sizes at the .70 level. What constitutes a small and a large sample is an issue of dispute as well. As already noted, even in the smallest sub-sample to be used in the present work the ratio of variables to cases is vicinity of 1 to 5. In any case, however, it was decided to use the .70 cut-off point for all sub-samples. As it is evident from the

correlation Tables 4, 5.1 and 5.2, there are only two correlation coefficients which, consistently, exceed the .70 point: the coefficient between initial grade and grade and the coefficient between initial grade and objective career success. The former case does not constitute a problem because grade will not be used as a predictor. The latter case does not constitute a problem either because objective career success and initial grade will not be used as predictor variables within the same block. None of the other coefficients approached the .70 cut-off point. Therefore, according to the technique of visual inspection of the correlation matrix, multicollinearity is not an issue of concern in the present work.

The above technique, however, although it is probably the most widely used, is not flawless. It is likely that even severe multicollinearity is not reflected in the size of the correlation coefficients (e.g., Berry & Feldman, 1985; Chatterjee & Price, 1991; Lewis-Beck, 1980). Low intercorrelations do not exclude the possibility for near perfect linear combinations. Therefore, use of the testing approach which involves the study of the eigenvalues of the principal components was also used (Chatterjee & Price; 1991; Gunst & Mason, 1977). The technique involves the inspection of the eigenvalues obtained for the principal components of the correlation matrix that is formed for the variables of interest. Detection of an eigenvalue much smaller than the rest and near zero suggests that multicollinearity is present (Chatterjee & Price, 1991). Yet, a clearer criterion is the size of the square root of the ratio of the greatest to the smallest eigenvalue. A size greater than 15, an empirically derived cut-off point, is evidence of strong multicollinearity (Chatterjee & Price, 1991). The eigenvalues of the principal components derived by the analyses for the six samples to be used in the regression analyses are presented in Appendix 6. In all cases there is a gradual decrease in the size of eigenvalues and none of them is near zero. In addition, the square root of the ratio of the maximum to the minimum eigenvalue ranges from 2.31 to 3.74. Therefore, multicollinearity in the predictor variables does not constitute a threat in the present work.

(7) There must be no correlation between the error term and the predictor variables. This refers to omission from the regression equation of relevant variables that are correlated with the predictor variables in the equation. This can lead to, positive or negative, bias in the estimation of the regression coefficients. This assumption refers to one type of "specification error" (e.g., Berry & Feldman, 1985; Pedhazur, 1982). The term "specification error" is rather general and refers to a variety of assumptions related to the regression analysis including: the omission of relevant variables, inclusion of irrelevant variables, nonlinearity and nonadditivity (e.g. Berry & Feldman, 1985; Pedhazur, 1982; Schroeder *et al.*, 1986). In the present work the use of the control variables should offer some protection against this type of specification error. However,

Table 4: Inter-correlations. All respondents in upper triangle ( $n = 272$ ). Respondents in grade 5 and above in lower triangle ( $n = 104$ ).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Mentoring		.27	.41	.56	.13	.08	-.01	-.02	.41	.01	.08	-.01	-.08	-.16
2. Provision of Mentoring	.35		.32	.22	.29	.44	.24	.22	.34	-.05	-.07	.09	-.01	.09
3. Networking	.51	.28		.31	.27	.06	-.15	.11	.23	-.07	.19	.15	-.12	-.13
4. Subjective Career Success	.61	.29	.42		.31	.21	.03	.03	.41	-.18	.03	-.08	.01	-.03
5. Objective Career Success	.11	.16	.35	.24		.44	-.34	.56	.21	-.08	-.09	.02	.02	.13
6. Grade	.03	.17	-.10	.12	.10		.72	.19	.29	-.15	.48	.02	-.06	.02
7. Initial Grade	-.08	0.	-.33	-.12	-.75	.62		-.23	.14	-.09	-.07	0	-.08	-.08
8. Tenure	-.03	.19	.17	-.02	.62	-.07	-.54		.06	-.06	-.22	-.16	.25	.19
9. Work Involvement	.34	.42	.28	.37	.15	.21	.02	.01		-.05	.02	.08	.01	-.10
10. Anxiety	-.03	-.06	-.11	-.17	-.05	-.21	-.09	-.01	-.03		-.18	-.19	-.10	-.06
11. Extraversion	.21	.02	.23	.25	0	.05	.03	-.24	.17	-.20		.44	-.23	-.36
12. Independence	.09	.09	.17	.08	.07	.15	.05	-.19	.22	-.10	.38		-.28	-.46
13. Self-Control	-.26	-.03	-.16	-.14	.01	-.15	-.12	.28	-.10	-.06	-.24	-.31		.44
14. Tough-Mindedness	-.30	-.22	-.18	-.17	.16	-.04	-.15	.28	-.17	-.16	-.38	-.46	.48	

Upper triangle:  $|r| > .18$   $P < .001$ ,  $|r| > .15$   $P < .01$ ,  $|r| > .11$   $P < .05$ ; lower triangle:  $|r| > .31$   $P < .001$ ,  $|r| > .25$   $P < .01$ ,  $|r| > .20$   $P < .05$

Table 5.1: Inter-correlations for the women respondents. All women respondents upper triangle ( $n = 199$ ). Women respondents in grade 5 and above lower triangle ( $n = 61$ ).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Mentoring		.26	.37	.53	.17	.13	.01	-.05	.39	-.05	.08	.07	-.07	-.09
2. Provision of Mentoring		.26	.35	.21	.29	.51	.32	.14	.32	-.07	-.07	.10	-.07	-.11
3. Networking		.44	.25	.24	.28	.16	-.05	.09	.25	-.11	.17	.22	-.18	-.11
4. Subjective Career Success		.62	.26	.40	.28	.32	.11	.04	.38	-.22	.01	-.02	.01	.01
5. Objective Career Success		.15	.08	.38	.28	.47	-.32	.52	.19	.01	-.03	.09	-.03	.03
6. Grade		.11	.28	.09	.33	.14	.71	.19	.32	-.09	-.09	.03	-.10	-.08
7. Initial Grade		-.06	.14	-.23	-.01	-.74	.60	-.22	.18	-.10	-.10	-.04	-.10	-.11
8. Tenure		-.05	.02	.10	.0	.67	.01	-.55	.03	-.04	-.13	-.12	.20	.14
9. Work Involvement		.38	.38	.37	.32	.07	.24	.11	-.14	-.11	.04	.16	-.04	-.14
10. Anxiety		-.23	-.21	-.28	-.39	.09	-.19	-.17	.08	-.21	-.24	-.21	-.10	.02
11. Extraversion		.15	.0	.24	.28	.10	.04	-.08	.0	.21	-.34	.44	-.36	-.36
12. Independence		.21	.23	.33	.21	.18	.17	-.01	-.08	.31	-.09	.30	-.30	-.49
13. Self-Control		-.21	-.13	-.27	-.10	-.12	-.27	-.12	.16	-.23	.02	-.48	-.43	.47
14. Tough-Mindedness		-.19	-.24	-.16	-.11	.01	-.10	-.10	.30	-.26	-.02	-.36	-.53	.55

Upper triangle:  $|r| > .23$   $P < .001$ ,  $|r| > .18$   $P < .01$ ,  $|r| > .13$   $P < .05$ ; Lower triangle:  $|r| > .41$   $P < .001$ ,  $|r| > .31$   $P < .01$ ,  $|r| > .25$   $P < .05$

Table 5.2: Inter-correlations for the male respondents. All male respondents upper triangle ( $n = 73$ ). Male respondents in grade 5 and above lower triangle ( $n = 43$ ).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Mentoring		.35	.45	.59	.11	.12	.03	.07	.45	.12	-.03	-.17	-.22	-.28
2. Provision of Mentoring	.40		.26	.26	.31	.32	.08	.40	.44	-.01	-.07	.04	.15	-.04
3. Networking	.56	.24		.39	.34	-.01	-.26	.20	.17	-.04	.12	.03	-.07	-.10
4. Subjective Career Success	.56	.22	.38		.29	.23	.0	.07	.49	-.15	-.09	-.16	-.10	-.03
5. Objective Career Success	.06	.30	.34	.24		.35	-.44	.61	.29	-.23	-.16	-.14	.19	.27
6. Grade	.0	.11	-.24	.0	.03		.71	.16	.33	-.22	-.04	-.07	.16	.08
7. Initial Grade	-.06	-.14	-.42	-.20	-.78	.64		-.30	.10	-.05	.09	.02	.03	-.10
8. Tenure	.03	.42	.27	.01	.59	-.17	-.56		.14	-.09	-.38	-.27	.39	.25
9. Work Involvement	.26	.45	.15	.41	.28	.21	-.07	.18		.07	-.10	-.11	.10	.01
10. Anxiety	.18	.06	.0	-.03	-.25	-.20	.04	-.08	.20		-.13	-.13	-.14	-.21
11. Extraversion	.21	-.08	.14	.11	-.13	.16	.21	-.45	.07	-.12		.57	-.07	-.30
12. Independence	-.06	-.10	.01	-.04	-.11	.11	.12	-.33	.07	-.11	.57		-.19	-.45
13. Self-Control	-.37	.07	-.06	-.23	.17	.01	-.10	.39	.09	-.19	.03	-.14		.46
14. Tough-Mindedness	-.37	-.10	-.11	-.12	.33	-.06	-.25	.25	.0	-.27	-.32	-.43	.45	

Upper triangle:  $|r| > .36$   $P < .001$ ,  $|r| > .29$   $P < .01$ ,  $|r| > .22$   $P < .05$ ; lower triangle:  $|r| > .48$   $P < .001$ ,  $|r| > .39$   $P < .01$ ,  $|r| > .29$   $P < .05$

control variables were not included in the regressions conducted for the causal path analysis. Therefore, the presence of this type of error can potentially have effects on the estimation of the models in the causal path analysis, an issue which, as to be seen, had to be compromised. This issue will be discussed in the section where the development of the causal path analytic models will be described.

(8) The residuals must be distributed according to the normal distribution. Draper and Smith (1981) note that this assumption is usually satisfied. In addition, authors note that this assumption becomes critical only for small samples (e.g., Berry & Feldman, 1985; Bohrnstedt & Carter, 1971; Hanushek & Jackson, 1977). As already noted, the issue of what constitutes a small sample is not exactly clear; however, it is reminded that in the present work the lowest variables to cases ratio to be found in a single regression is at the level of 1 to 5.

The final point regarding the above assumptions is that least squares regression is a technique which is quite robust in violations of the assumptions that underlie it (e.g., Bohrnstedt & Carter, 1971; Pedhazur, 1982).

Apart from the conditions that were presented and tested above, there is an additional condition: that the values of the predictor variables are predetermined (non-stochasticity assumption). In non-experimental research this condition is never satisfied which makes the regression analysis sample specific (Chatterjee & Price, 1991).

### *Stepwise Regression*

The stepwise regression procedure attempts to construct the best-fit regression equation by selecting and keeping the predictor variables in terms of “usefulness”<sup>9</sup>. The selection of the variables is accomplished in a series of steps. In each step, and before progress to the next step is made, the procedure checks the variables already in the equation for the significance of their contribution to the model (or “usefulness”). Usefulness is determined with the use of the partial correlation between the variable under scrutiny and the criterion variable, with the rest of the variables already in the equation as co-variates. Only the variables whose partial correlations with the criterion variable fulfil the significance criterion set for the *t* - ratios are finally included in the equation (e.g., Draper & Smith, 1981; Henderson & Denison, 1989; Pedhazur, 1982). It is noted that in the present work the term “stepwise regression” is used under the interpretation provided by Draper and Smith (1981); that is the regression procedure which uses forward selection of variables with the possibility of elimination of predictor variables already in the equation in each step. The term, however, has been employed to indicate a range of methods dedicated to the identification of the “best” regression equation.

Following the suggestion of Draper & Smith (1981), the points of entry and exit for the stepwise regression were both set at the same, .05, level [because, the SPSS for Windows version 6.0 (SPSS Inc., 1993) does not allow for the option to set the exit point at the same or lower level than the entry point, the entry level was set at .05 and the exit level was set at .051].

A number of authors consider the stepwise procedure as one of the best available and recommend its use (e.g., Draper & Smith, 1981). "Best" is defined in terms of parsimony of the model and adequacy of prediction (Sokal & Rohlf, 1981). Stepwise regression is considered especially appropriate in cases where full specification of the model prior to the data collection is not possible (e.g., Sokal & Rohlf, 1981), as in the present work which is partly of exploratory character.

Authors, however, also call for caution with respect to the, sometimes unwise, choice of the initial pool of the predictor variables (e.g., Challenger, 1973; Draper & Smith, 1981; Schroeder, *et al.*, 1986). An allegedly major problem with the use of the stepwise procedure is the statistical significance of the  $R^2$  values. This problem is imposed by the fact that the "standard"  $F$  - statistic used to test the significance of the multiple correlations tends to be positively biased towards significance for the final model (e.g., Lovell, 1983; McIntyre, *et al.*, 1983; Pope & Webster, 1972). This is because the variables to be included in the final "best fit" equation are selected on the basis of superior data fitting quality from the pool of the initial variables (e.g., McIntyre, *et al.*, 1983) [use of the  $F$  - statistic with all the variables from the initial pool, as some would recommend, leads to a negative bias towards significance because the final model uses only a selection of these variables, however well they fit the data (e.g., McIntyre, *et al.*, 1983)]. These problems are imposed by the fact that the statistics commonly employed in regression analysis have rigorous statistical interpretations only in regression models which include sets of predictors chosen in advance (i.e., models developed by forcible entry of the predictor variables in the equation) (e.g., Pope & Webster, 1972). A number of authors have attempted to account for the problem and they have developed sampling distributions of the commonly used statistical tests to account for the stepwise procedures (Diehr & Hoflin, 1974; McIntyre, *et al.*, 1983; Wilkinson, 1979). These distributions, however, are far from complete. They cover only limited numbers of cases in terms of initial pool of predictors, number of predictors in the final model and sample sizes. Furthermore, with respect to the analysis in this investigation, the situation is made more complicated in the hierarchical regression equations; in this case blocks which include control variables (that are forcibly entered into the equation) are introduced in the first steps. Therefore, for these reasons, it was

decided not to make use of these Tables in the present work. It is considered that their use will not offer to the interpretation of statistical significance.

#### *The Use of Standardised Regression Coefficients*

The relative importance of the predictor variables in the regression equation was assessed by means of the size of the standardised regression coefficients beta ( $\beta$ ). The use of the standardised regression coefficients as a means for discussing the relative importance of the predictors is universally accepted in the literature. Authors, however call for caution when comparisons of  $\beta$  values are made (e.g., Achen, 1982; Challenger, 1973; Pedhazur, 1982). One of the reasons is that  $\beta$  - values are affected by the variability of the relevant variables, whilst unstandardised regression coefficients are not. Nonetheless, it is considered inappropriate to use unstandardised regression coefficients in cases where the scales of measurement (e.g., attitude scales) are not uniform or do not have direct empirical analogue for their meaning (e.g., Schooler & Schoenbach, 1994). Furthermore, the pattern of relationships, hence the relative and not the absolute effect sizes, is the point of interest in the present work.

#### *The use of the Coefficient of Determination*

The adjusted values for the coefficient of multiple determination  $R^2$  (Wonnacott & Wonnacott, 1979) will be reported. This is because for relatively small sample sizes,  $R^2$  values tend to be inflated. The adjusted  $R^2$  takes into account the increase in the number of predictors in the equation (e.g., Berry & Feldman, 1985; Schroeder, *et al.*, 1986; Wonnacott & Wonnacott, 1979). Therefore, the adjusted  $R^2$  can provide a better estimation of the actual increase in the amount of variance accounted for when a new variable (or block of variables) enters the regression equation. Achen (1982) recommends use of the adjusted  $R^2$  when we have sample sizes below 200. Furthermore, the adjusted  $R^2$  is especially recommended when the stepwise procedure is used (e.g., Cooley & Lohnes, 1971; Montgomery & Morrison, 1973; McIntyre, *et al.*, 1983).

#### *Testing for the Significance of Increments in Variance in Hierarchical Regression*

In hierarchical regression analysis there is the need to test for the significance of the increment in variance that is brought by each new block of variables over the previous blocks. There are two cases: first, only a single variable is included in the new block. In this case testing



for the significance of the increase in the proportion of variance is equivalent to assessing the significance of the corresponding standardised regression coefficient (e.g., Cohen & Cohen, 1975; Pedhazur, 1982); second, more than one variable is included in the new block. In this case the significance of the increment in the proportion of variance was estimated using the following formula (e.g., Pedhazur, 1982):

$$F(k_1 - k_2, N - k_1 - 1) = (R^2_{y.12\dots k_1} - R^2_{y.12\dots k_2}) / (k_1 - k_2) / (1 - R^2_{y.12\dots k_1}) / (N - k_1 - 1),$$

where  $R^2_{y.12\dots k_1}$  is the squared multiple regression coefficient including the variance increment,  $R^2_{y.12\dots k_2}$  is the squared multiple regression coefficient excluding the variance increment,  $k_1$  is the “total” number of variables (i.e., including the variables the increment caused by is of interest),  $k_2$  is the number of variables before the entrance of the variables which caused the increment, and  $N$  is the sample size. Although this formula can be used for any number of variables,  $k_1 - k_2$ , in practice it is used only in the case of more than one (i.e.,  $k_1 - k_2 > 1$ ), because, as already noted, in the case of the addition of just one variable in the model the testing for the significance in the increment of the proportion of variance can be done by testing for the significance of the corresponding regression coefficient (e.g., Pedhazur, 1982).

### 7.3 TESTING FOR THE VALIDITY OF THE NETWORKING AND THE PROVISION OF MENTORING SCALES

This section investigates the validity of the newly developed scales for networking and provision of mentoring. First, the discriminant validity of the scales over the mentoring scale was investigated. Next, the construct validity of the scales was investigated, by investigating the factor structures of the scales and their relationships with other variables.

#### *Discriminant Validity of the Networking over the Mentoring scale*

The definition of mentoring in its classical or primary form has been adopted in the present work and the phenomena of peer mentoring and secondary mentoring were considered under the framework of networking. Therefore, an issue which arises is whether the mentoring scale and the, newly constructed, networking scale tap different (though related) constructs. In other words, the issue of discriminant or divergent validity of the networking scale with respect to the mentoring scale must be investigated.

Principal components analysis followed by varimax rotation was conducted on all the items which are included in the networking scale and the mentoring scale. A two-factor solution was forced. The results of the analysis are presented in Table 6.1. All the items in the

Table 6.1: Principal components analysis followed by varimax rotation on the items included in the mentoring and networking scales. Forced two-factor solution. The loadings of the mentoring items 1, 2 and 3 on both factors are presented ( $n = 272$ ).

	Loadings	
	Factor 1	Factor 2
Eigenvalue, Percent	10.05, 35.9	3.55, 12.7
Item		
Mentoring 01	<b>.59</b>	.37
Mentoring 02	<b>.43</b>	<b>.49</b>
Mentoring 03	<b>.45</b>	<b>.50</b>
Mentoring 04	<b>.49</b>	<b>.48</b>
Mentoring 05	<b>.67</b>	.13
Mentoring 06	<b>.49</b>	.04
Mentoring 07	<b>.73</b>	.18
Mentoring 08	<b>.70</b>	.14
Mentoring 09	<b>.70</b>	.19
Mentoring 10	<b>.78</b>	.11
Mentoring 11	<b>.75</b>	.13
Mentoring 12	<b>.74</b>	.06
Mentoring 13	<b>.72</b>	.20
Mentoring 14	<b>.73</b>	.11
Mentoring 15	<b>.81</b>	.20
Mentoring 16	<b>.66</b>	.09
Mentoring 17	<b>.75</b>	.11
Mentoring 18	<b>.73</b>	.03
Networking 01	.15	<b>.58</b>
Networking 02	.23	<b>.60</b>
Networking 03	.32	<b>.54</b>
Networking 04	.17	<b>.47</b>
Networking 05	.08	<b>.74</b>
Networking 06	.33	<b>.54</b>
Networking 07	.04	<b>.73</b>
Networking 08	.03	<b>.68</b>
Networking 09	-.12	<b>.69</b>
Networking 10	-.04	<b>.70</b>

networking scale loaded on the same factor. All the items in the mentoring scale loaded on the other factor; apart from item 2 (“...a higher-ranking individual...has...given or recommended you for assignments that required personal contact with superiors in different parts of the organisation?”), item 3 (“...a higher-ranking individual...has...given or recommended you for assignments in different parts of the organisation?”) and item 4 (“...a higher-ranking individual...has...given or recommended you for assignments that helped you meet new colleagues?”). These items loaded on both factors. None of these items, however, can be considered as referring to mentoring relationships among individuals of the same status (that is secondary mentoring or peer mentoring). Furthermore, and most importantly, all the items in the networking scale loaded on a single factor.

A new analysis employing exactly the same techniques, but forcing a three-factor solution was conducted. The results are presented in Table 6.2. Again, the items in the networking scale formed one factor, the second largest. No items of the mentoring scale had loadings on this factor. All items of the mentoring scale loaded on the first factor; except items 1 (“...a higher-ranking individual...has...given or recommended you for challenging assignments that present opportunities to learn new skills?”), 2, 3 and 4. These items formed the third factor. Of course, removing these items from the mentoring scale was not an issue to consider as the mentoring scale has established reliability and validity.

The above analysis provides support for divergent validity of the newly developed networking scale over the established (primary) mentoring scale (Dreher & Ash, 1990). In other terms, the view of secondary mentoring under the framework of networking and the view of mentoring under the framework of primary mentoring in the context of the present work is supported. Items that referred to secondary mentoring loaded in the networking factor.

#### *Discriminant Validity of the Provision of Mentoring over the Mentoring Scale*

The issue of the divergent validity for the scales which measured reception of mentoring and provision of mentoring was also examined. These scales are aimed at tapping constructs which are not as interwoven as reception of mentoring and networking are, though they may be causally linked. However, it was considered appropriate to test for the extent to which the contents of the scales are perceived differently by the respondents. Principal components analysis forcing a two factor solution and followed by varimax rotation was conducted on the items of the reception and provision of mentoring scales. The results are presented in Table 7. Two very clear factors emerged. The items in the scale which assessed reception of mentoring

Table 6.2: Principal components analysis followed by varimax rotation on the items included in the mentoring and networking scales. Forced three-factor solution ( $n = 272$ ). Only the highest/unambiguous loadings on each factor are reported.

	Loadings		
	Factor 1	Factor 2	Factor 3
Eigenvalue, Percent	10.05, 35.9	3.55, 12.7	2.01, 7.2
Item			
Mentoring 01			.62
Mentoring 02			.82
Mentoring 03			.79
Mentoring 04			.70
Mentoring 05	.58		
Mentoring 06	.45		
Mentoring 07	.67		
Mentoring 08	.65		
Mentoring 09	.70		
Mentoring 10	.80		
Mentoring 11	.78		
Mentoring 12	.76		
Mentoring 13	.72		
Mentoring 14	.75		
Mentoring 15	.78		
Mentoring 16	.63		
Mentoring 17	.73		
Mentoring 18	.73		
Networking 01		.67	
Networking 02		.69	
Networking 03		.65	
Networking 04		.60	
Networking 05		.72	
Networking 06		.47	
Networking 07		.67	
Networking 08		.60	
Networking 09		.62	
Networking 10		.61	

Table 7: Principal components analysis followed by varimax rotation on the items included in the reception of mentoring and provision of mentoring scales. Forced two-factor solution.

	Loadings	
	Factor 1	Factor 2
Eigenvalue, Percent	9.38, 39.1	4.08, 17.
Item		
Reception of Mentoring 01	<b>.65</b>	.27
Reception of Mentoring 02	<b>.52</b>	.32
Reception of Mentoring 03	<b>.54</b>	.37
Reception of Mentoring 04	<b>.58</b>	.27
Reception of Mentoring 05	<b>.67</b>	.15
Reception of Mentoring 06	<b>.48</b>	.08
Reception of Mentoring 07	<b>.76</b>	.10
Reception of Mentoring 08	<b>.71</b>	.08
Reception of Mentoring 09	<b>.73</b>	.03
Reception of Mentoring 10	<b>.77</b>	.11
Reception of Mentoring 11	<b>.77</b>	-.03
Reception of Mentoring 12	<b>.73</b>	.02
Reception of Mentoring 13	<b>.74</b>	.06
Reception of Mentoring 14	<b>.73</b>	.01
Reception of Mentoring 15	<b>.83</b>	.09
Reception of Mentoring 16	<b>.63</b>	.14
Reception of Mentoring 17	<b>.73</b>	.12
Reception of Mentoring 18	<b>.71</b>	.05
Provision of Mentoring 01	.05	<b>.78</b>
Provision of Mentoring 02	.12	<b>.84</b>
Provision of Mentoring 03	.11	<b>.79</b>
Provision of Mentoring 04	.11	<b>.88</b>
Provision of Mentoring 05	.10	<b>.92</b>
Provision of Mentoring 06	.10	<b>.90</b>

formed the first factor and the items in the scale which assessed provision of mentoring formed the second factor. This result supports the divergence of the one scale over the other.

The next step was to investigate the factor structures and the correlates of the networking and provision of mentoring scales.

### *Factor Structure and Correlates of the Networking Scale*

#### *Factor Structure*

Principal components analysis for initial factor extraction followed by oblique rotation was conducted. The direct oblimin criterion for rotation was used (Jennrich & Sampson, 1966). According to the recommendations made by Harman (1976),  $\delta$  was set equal to zero. The Kaiser or eigenvalues greater than one criterion for factor extraction was used (Guttman, 1954). This criterion has been considered to be satisfactory and more appropriate than other criteria despite the fact that it is mainly based on heuristic and practical grounds (Kaiser, 1974; Kim & Mueller, 1994b).

Oblique rotation is considered to be less “artificial” than orthogonal rotation, as it does not impose the arbitrary restriction that the factors do not correlate (Dunteman, 1994; Kim & Mueller, 1978; 1994b; Norusis, 1993). Authors advise that the choice between orthogonal and oblique rotation should be made on the basis of the theoretical background and expectations (e.g., Kim & Mueller, 1978; 1994a). Oblique rotation fits well with the theoretical and logical assumptions underlying the consideration of networking in this work. In particular, expressive and instrumental networks should be overlapping in the organisational context. To illustrate, colleagues who are friends provide friendship and socio-emotional support, but they may also provide information about what is happening in the organisation (i.e., functions provided by collegial or even special peers).

The analysis yielded two factors which accounted for 61.2% of the total variance<sup>10</sup>. The rotated factor solution is presented in Table 8. Item number 5 (“I have a network of contacts for obtaining information about what’s happening within the organisation”) loaded on both factors; its loading was not particularly high on any of the two factors (loadings were .42 on factor 1 and .48 on factor 2). The rest of the items had clear loadings on one of the two factors. It was decided that item 5 should not be included in any of the factors. The difference in the magnitude of the loadings did not justify exclusion from one of the factors and inclusion in the other. On the other hand, inclusion of the item in both factors would not add anything to their relative explanatory or predictive power. However, item 5 was included in the analysis which involved

Table 8: Factor structure of the networking scale (principal components analysis followed by oblique rotation). Results are based on the analysis of the data obtained by all respondents ( $n = 272$ ).

Factor	Eigenvalue	Loading	Percentage
FACTOR 1 (Instrumental networking)	4.39		43.9
I have a network of friendships in the organisation which can help to further my career progression.		.58	
I keep in touch with a number of people in the organisation who are at higher levels than I am.		.73	
I personally know a number of people who occupy important posts in the organisation.		.82	
I personally know a number of people who work in other departments of the organisation.		.82	
I personally know a great number of people in the organisation.		.85	
FACTOR 2 (expressive networking)	1.73		17.3
There are individuals in the organisation with whom I exchange information concerning what's happening in the organisation.		.84	
There are individuals in the organisation with whom I frequently talk about work related topics.		.90	
There are individuals in the organisation with whom I share emotional support, feedback and work confirmation.		.85	
There are individuals in the organisation whom I consider as best friends and I share any kind of issue, professional or personal.		.62	

scores on the full networking scale. The item's loadings on both factors, though not heavy, can be considered substantial. Therefore, it makes some contribution to the full networking scale. Furthermore, the item seemed to "behave" properly in the other item analysis procedures, though its inter-total correlation was low.

Factor 1 consists of items 6, 7, 8, 9 and 10, and is considered to reflect instrumental networking. Factor 1 accounted for 43.9% of the total variance. Factor 2 consists of items 1, 2, 3 and 4, and is considered to reflect expressive networking. Factor 2 accounted for 17.3 % of the total variance. The two factors correlated positively ( $r = .40$ ). Two sub-scales were formed. The items in factor 1 formed the scale of instrumental networking and the items in factor 2 formed the scale of expressive networking. Scores on expressive and instrumental networking were calculated by summing raw scores on the items which were included in the corresponding factors. Cronbach alphas for expressive and instrumental networking were .83 and .81, respectively.

Analysis by gender yielded factors with exactly the same composition as the analysis which included all respondents (again, item 5 had loadings with values between .40 and .49). The rotated factor solutions are presented in Table 8.1. The difference, however, was that for women respondents the correlation between expressive and instrumental networking was in the negative direction ( $r = -.39$ ) (the corresponding correlation coefficient for men respondents was .44).

### *Correlates*

The partial correlation coefficients of the scores on expressive networking and instrumental networking with objective career success, subjective career success and mentoring are presented in Table 9.1. Initial grade and tenure were used as co-variates. The correlations of the scores on expressive networking with scores on subjective career success and mentoring ( $r = .31$  and  $r = .40$ , respectively,  $P < .001$  in both cases) were stronger than the correlations of instrumental networking with scores on subjective career success and mentoring ( $r = .23$  and  $r = .31$ , respectively,  $P < .001$  in both cases). On the other hand, the correlation between instrumental networking and objective career success ( $r = .26$ ,  $P < .001$ ) was considerably stronger than the correlation between expressive networking and objective career success ( $r = .09$ , *ns*).

The suggestions made by the correlation coefficients were confirmed by two hierarchical regressions. The block which included initial grade and tenure was used as control block; these variables were forcibly entered into the equation. The block which consisted of



Table 8.1: Factor structures of the networking scale (principal components analysis followed by oblique rotation) by gender (percentages of variance accounted for by each factor are equal to the eigenvalues multiplied by 10).

Factor	Men ( <i>n</i> = 73)		Women ( <i>n</i> = 199)	
	Eigenvalue	Loading	Eigenvalue	Loading
<b>FACTOR 1 (Instrumental networking)</b>				
	4.50		4.33	
I have a network of friendships in the organisation which can help to further my career progression.		.73		.53
I keep in touch with a number of people in the organisation who are at higher levels than I am.		.72		.74
I personally know a number of people who occupy important posts in the organisation.		.83		.82
I personally know a number of people who work in other department of the organisation.		.78		.82
I personally know a great number of people in the organisation.		.88		.83
<b>FACTOR 2 (expressive networking)</b>				
	1.54		1.76	
There are individuals in the organisation with whom I exchange information concerning what's happening in the organisation.		.81		-.86
There are individuals in the organisation with whom I frequently talk about work related topics.		.85		-.92
There are individuals in the organisation with whom I share emotional support, feedback and work confirmation.		.77		-.86
There are individuals in the organisation whom I consider as best friends and I share any kind of issue, professional or personal.		.64		-.55

Table 9.1: Partial correlation coefficients, with tenure and initial grade as co-variables, for expressive and instrumental networking with objective career success, subjective career success and mentoring (values in parentheses are for the correlation coefficients without statistical control for any variables).

	objective career success	subjective career success	mentoring
Expressive networking	.09 (.10)	.31 <sup>a</sup> (.30 <sup>a</sup> )	.40 <sup>a</sup> (.40 <sup>a</sup> )
Instrumental networking	.26 <sup>a</sup> (.33 <sup>a</sup> )	.23 <sup>a</sup> (.23 <sup>a</sup> )	.31 <sup>a</sup> (.30 <sup>a</sup> )

<sup>a</sup>  $P < .001$

Table 10.1: Partial correlation coefficients, with tenure as co-variate, between scores on expressive and instrumental networking and scores on the personality factors.

	Anxiety	Extraversion	Independence	Self-Control	Tough-Mindedness
Expressive networking	-.05	.16 <sup>b</sup>	.03	-.03	-.13 <sup>c</sup>
Instrumental networking	-.05	.21 <sup>a</sup>	.21 <sup>a</sup>	-.20 <sup>a</sup>	-.13 <sup>c</sup>

<sup>a</sup>  $P < .001$    <sup>b</sup>  $P < .01$    <sup>c</sup>  $P < .05$

expressive and instrumental networking was entered into the regression equation second using the stepwise procedure. Subjective career success and objective career success were the criterion variables in each regression. The results are presented in Table 9.2 With subjective career success as criterion, the final equation, apart from initial grade and tenure, included only the variable of expressive networking ( $\beta = .31, t = 5.31, P < .001$ ). On the other hand, with objective career success as criterion, the final equation, apart from initial grade and tenure, included only the variable of instrumental networking ( $\beta = .21, t = 4.35, P < .001$ ).

Partial correlation coefficients, controlling for tenure, between scores on expressive networking, instrumental networking and the five personality factors are presented in Table 10.1. Scores on expressive networking were related to scores on Extraversion ( $r = .16, P < .01$ ) and Tough-Mindedness ( $r = -.13, P < .05$ ). Scores on instrumental networking were related to scores on Extraversion ( $r = .21, P < .001$ ), Independence ( $r = .21, P < .001$ ), Self-Control ( $r = -.20, P < .001$ ) and Tough-Mindedness ( $r = -.13, P < .05$ ).

Finally, scores on expressive and instrumental networking were regressed on the personality factors. Hierarchical regression was used. Tenure was entered prior to the personality factors by means of forcible entry. The block which included the five personality factors was included in the equation in the second step using the stepwise method. The results of the regressions are presented in Table 10.2. Only Extraversion was included in both equations. It was related to both scores on expressive networking ( $\beta = .16, t = 2.55, P < .05$ ) and scores on instrumental networking ( $\beta = .18, t = 2.90, P < .01$ ). Self-Control was related to scores on instrumental networking ( $\beta = -.17, t = -2.69, P < .01$ ).

Regarding the full networking scale, total scores on the scale correlated significantly with scores on mentoring ( $r = .41, P < .001$ ); provision of mentoring ( $r = .32, P < .001$  and  $r = .28, P < .01$  for all respondents and respondents in grade 5 and above, respectively), subjective career success ( $r = .31, P < .001$ ); objective career success ( $r = .27, P < .001$ ); Extraversion ( $r = .19, P < .001$ ); Independence ( $r = .15, P < .01$ ); and Tough-Mindedness ( $r = -.13, P < .05$ ). Furthermore, scores on the scale correlated significantly with scores on work involvement ( $r = .23, P < .001$ ).

The above results lend support to the validity of the networking scale. Therefore, the scale seems to demonstrate reliability, face and construct (convergent and divergent) validity. Furthermore, the scale was constructed on the basis of existing research on networking, therefore, it fulfils the criterion for content validity.

Table 9.2: Hierarchical regressions with subjective career success and objective career success regressed on expressive and instrumental networking using the stepwise procedure (points of entry and exit were set at .05). The block which includes the variables initial grade and tenure was forcibly entered the equation.

Predictor variables	Subjective career success			Objective career success		
	$\beta$	$t$	$R^2$	$\beta$	$t$	$R^2$
Initial Grade *	.06	1.06		-.23	-4.60 <sup>a</sup>	
Tenure	.04	.69	0	.47	9.69 <sup>a</sup>	.37
Expressive networking	.31	5.31 <sup>a</sup>		-.01	-.16	
Instrumental networking	.12	1.92	.09	.21	4.36 <sup>a</sup>	.41

$F = 9.66$ <sup>a</sup>

Adjusted  $R^2$  values are presented <sup>a</sup>  $P < .001$

$F = 63.12$ <sup>a</sup>

\* Calculations in the equation for objective career success are based on logarithmic values

Table 10.2: Expressive and instrumental networking regressed on the personality factors. The stepwise procedure was used for the block which included the personality factors. Tenure was entered into the equation by forcible entry ( $n = 272$ ).

Variable	Expressive				Instrumental			
	$\beta$	$R^2$	$\Delta R^2$	$t$	$\beta$	$R^2$	$\Delta R^2$	$t$
Tenure	.04	0		.65	.23	.02		3.69 <sup>a</sup>
Extraversion	.16			2.55 <sup>c</sup>	.18			2.90 <sup>b</sup>
Self-Control		.02	.02		-.17	.08 <sup>b</sup>	.06 <sup>c</sup>	-2.69 <sup>b</sup>
Extraversion					(.12)			1.90 <sup>d</sup> (it was not included)

$F(2, 266) = 3.25$ <sup>c</sup>

Adjusted  $R^2$  values are presented<sup>a</sup>  $P < .001$ <sup>b</sup>  $P < .01$ <sup>c</sup>  $P < .05$ <sup>d</sup>  $P < .05$

$F(3, 265) = 8.63$ <sup>a</sup>

### *Factor Structure and Correlates of the Provision of Mentoring Scale*

Only scores derived from respondents who reported being in grade 5 or above were used in the analyses where provision of mentoring is included. It was considered that to have a valid indication for provision of mentoring, individuals who occupy sufficiently high level posts in the organisation that allow for the provision of mentoring should be included in the analysis. For this reason, only respondents who indicated their current grade to be greater of or equal to 5 were included in the analysis. Grade 4 is the lowest grade, in terms of responsibilities and power, which can be associated with provision of mentoring functions. Furthermore, all the respondents who were included in the analysis had a minimum tenure of two years. Therefore, individuals in grade 5 and above should have had an adequate amount time to potentially provide mentoring and develop mentoring relationships with less experienced organisational members. This choice is supported by descriptive statistics regarding the number of subordinates reported by individuals in different grades. Mean and median self-reported numbers of direct subordinates for respondents in grade 3 and below ( $n = 93$ ) were .86 and zero, respectively; for respondents in grade 4 and above ( $n = 176$ ) were 4.74 and 1, respectively; and for respondents in grade 5 and above ( $n = 104$ ) were 6.57 and 3, respectively. As expected, this restriction on minimal grade considerably reduced the numbers of cases in each group. The number of respondents in grade 5 and above, regardless of gender, was equal to 104; the number of women respondents in grade 5 and above was equal to 61; and the number of men respondents in grade 5 and above was equal to 43. Therefore, the following analyses were conducted using the cases ( $n = 104$ ) which fulfil this condition.

The purpose of the scale that assesses provision of mentoring has not been the assessment of specific mentoring functions. The aim was to construct a short, yet reliable and valid, scale in order to provide an initial investigation of some of the alleged relationships of the phenomenon of provision of mentoring. This is illustrated in the factor structure of the scale. Principal components analysis, using the eigenvalues greater than one criterion, produced one factor accounting for 75.6% of the total variance. All the items in the scale loaded highly on this factor. The loadings had a range from .78 (item 1: "...to whom I have consistently given challenging assignments") to .94 (item 5: "...I was personally interested in his or her professional development"). The loadings of all items are presented in Table 11. Therefore, the scale seems to be a general scale which assesses amount of provision of mentoring.

Scores on provision of mentoring correlated significantly with scores on mentoring ( $r = .35, P < .001$ ); networking ( $r = .28, P < .01$ ); subjective career success ( $r = .29, P < .01$ ); and Tough-Mindedness ( $r = -.22, P < .05$ ). The correlation coefficients with objective career success

Table 11: Principal components analysis on the items included in the provision of mentoring scale. The eigenvalues greater than one criterion for factor extraction was used ( $n = 272$ ). One factor was extracted.

---

	Loadings
Eigenvalue, Percent	4.53, 75.6
Items	

---

In my career history in this institution there has been at least one subordinate...

1. ... to whom I have consistently given challenging assignments	.78
2. ...whom I have introduced to higher level individuals	.84
3. ...whom I have consistently provided emotional support	.82
4. ...to whom I have given advice concerning his or her career	.91
5. ...I was personally interested in his or her professional development	.94
6. ...I was personally interested in his or her career	.92

---

( $r = .16$ ), grade ( $r = .17$ ) and tenure ( $r = .19$ ) were not significant, but they were in the expected direction. Furthermore, scores on provision of mentoring correlated significantly with scores on work involvement ( $r = .42, P < .001$ ).

The scale, therefore, seems to demonstrate reliability, face and construct validity (as it correlates in the expected direction with the measures it should correlate), though it does not provide a detailed description of the phenomenon of provision of mentoring (however, this is out of the scope of the present work).

#### 7.4 INTER-RELATIONSHIPS AND CAUSAL PATH MODELS

This section investigates the relationships between personality, the inter-personal relationship variables and the career success variables. The first stage of analysis included the conduct of a number of hierarchical regression analyses imposing control for human capital, demographic and career stage variables. The second stage involved the development of the causal path models that link the above variables. The first stage was necessary for the development of the causal path models that was accomplished in the second stage.

Development of causal path models beyond the regression analysis models was considered necessary in the present investigation. Not only does causal path analysis allow for quantitative estimation and comparison of the inter-variable relationships within a model, but also allows for the estimation and disentanglement of the indirect effects of a variable on another variable. Multiple regression analysis allows for the estimation of the hypothesised direct effect only, which is equal to the regression coefficient, but not for the indirect effects which are also important parts of the causal process and they can be of considerable size (e.g., Asher, 1983; Davis, 1985; Pedhazur, 1982). Furthermore, because causal path analysis allows for the clearer identification of the ways, direct or indirect, in which certain variables exert their effects on another variable, it allows for a more comprehensive account of the structure of a causal system, that is a better insight into the way that system of variables works (Asher, 1983; Davis, 1985).

Immediately after the first step (i.e., the hierarchical regressions) and before the conduct of the causal path analysis, statistical investigation for mediating effects of the inter-personal relationship variables on the relationship between personality and career success is done. If mediation in the strict statistical sense (e.g., Judd & Kenny, 1981) is found, the implication will be that mentoring, networking and provision of mentoring can provide an exhaustive explanation for the mechanisms that are involved in the relationship between personality and career success. If mediation in the strict statistical sense is not found, the implication will be that these variables



alone do not provide an exhaustive account for the link between personality and career success and that other variables are probably involved and need to be investigated.

#### *7.4.1 INTER-RELATIONSHIPS*

##### *The Relationship of Career Success with Personality, Mentoring and Networking*

To investigate the inter-relationship of the personality factors, mentoring and networking with the indices of career success, hierarchical regression was employed. Separate regressions for each gender were conducted along with the regressions for the whole sample.

The variables were entered into the regression equation in the following blocks: Block 1: age, education, social class (the term is used for class of social origin), marital status; Block 2: initial grade, tenure; Block 3: work involvement; Block 4: personality (Anxiety, Extraversion, Independence, Self-Control, Tough-Mindedness); Block 5: mentoring, networking. The first two blocks represent human capital and career stage variables. The effects of age and tenure on the objective career success index could have been controlled for by correcting this index using functions of age and tenure (e.g., Bozionelos & Melamed, 1992a; Melamed, 1995b). However, treatment of time-related confounding variables as co-variables is recommended when these variables are likely to relate to both criteria and predictors (Melamed, 1995b). Tenure, and maybe age, is likely to relate to the amount of reception and provision of mentoring and networking. The personality factors were entered into the equation before the block of networking and mentoring because individual differences in personality are assumed to exist prior to the development of any interpersonal relationships in a social context such as an organisation. Furthermore, personality should affect the formation of social relationships.

The method of variable entrance into the equations for blocks 1, 2, and 3 was that of forceful entry. The method of entrance of the variables in blocks 4 and 5 was stepwise. The stepwise method was preferred for the variables of these blocks because they represent the variables of interest in the present work. Therefore, clear-cut relationships lead to clearer suggestions. Amount of variance accounted for is still important, but identification of particular variables and the type of the relationship is more important.

##### *The Relationship of Objective Career Success with Personality, Mentoring and Networking*

The results of the hierarchical regressions with objective career success as criterion variable are presented in Tables 12 and 12.1, for the whole sample and by gender, respectively.

Table 12: Hierarchical regression (forcible entry for blocks 1, 2, 3 and stepwise for blocks 4 and 5) with objective career success as criterion ( $n = 272$ ).

Variable	$\beta$	$R^2$	$\Delta R^2$	$t$
Age	-.05			-.71
Education	.18			3.44 <sup>a</sup>
Social class	-.11			-2.28 <sup>c</sup>
Marital status	.06			1.20
		.03		
Initial Grade *	-.32			-5.62 <sup>a</sup>
Tenure	.48			7.72 <sup>a</sup>
		.40	.37	
Work Involvement	.16			3.28 <sup>b</sup>
		.43	.03	
Personality factors	(none was included in the equation)			
Networking	.14			2.83 <sup>b</sup>
		.45 <sup>b</sup>	.02 <sup>c</sup>	

$F(8, 252) = 27.61$  <sup>a</sup>

Adjusted  $R^2$  values are presented <sup>a</sup>  $P < .001$  <sup>b</sup>  $P < .01$  <sup>c</sup>  $P < .05$

\* estimations are based on logarithmic values

Table 12.1: Hierarchical regression (forcible entry for blocks 1, 2, 3 and stepwise for blocks 4 and 5) with objective career success as criterion by gender.

Variable	Men ( $n = 73$ )				Women ( $n = 199$ )			
	$\beta$	$R^2$	$\Delta R^2$	$t$	$\beta$	$R^2$	$\Delta R^2$	$t$
Age	.04			.34	-.12			-1.58
Education	.18			1.80	.18			2.93 <sup>b</sup>
Social class	-.01			-.09	-.13			-2.25 <sup>c</sup>
Marital status	.05			.55	.11			1.70
Initial Grade *	-.43	.03		-4.01 <sup>a</sup>	-.32	.01		-4.83 <sup>a</sup>
Tenure	.42			3.39 <sup>a</sup>	.48			6.76 <sup>a</sup>
Work Involvement	.20	.44	.41	2.10 <sup>c</sup>	.37	.36		2.84 <sup>b</sup>
Anxiety	-.25	.47	.03	-2.78 <sup>b</sup>	.17	.41	.04	
Networking		.52 <sup>b</sup>	.05		.15	.44 <sup>b</sup>	.03 <sup>c</sup>	2.61 <sup>b</sup>

$F(8, 62) = 10.41$  <sup>a</sup>

Adjusted  $R^2$  values are presented <sup>a</sup>  $P < .001$  <sup>b</sup>  $P < .01$  <sup>c</sup>  $P < .05$

$F(9, 180) = 17.28$  <sup>a</sup>

\* Estimations are based on logarithmic values

A relationship between the control variables in blocks 1, 2, and 3 and objective career success was identified for the whole sample. None of the personality factors (Block 4) were included in the equation. From the block of mentoring and networking (block 5), only networking was included in the equation ( $\beta = .14, t = 2.83, P < .01$ ). It increased the amount of variance accounted for by the model by a significant 3%. The model accounted for 45% of the variance in objective career success ( $F(8, 252) = 27.61, P < .001$ ). This result suggests that scores on networking are directly related to objective career success.

Analysis by gender revealed patterns of relationships which suggested a moderating effect of gender.

In the case of both genders, the entrance of blocks 1, 2 and 3 increased the amount of variance accounted for by the model. However, the entrance of blocks 4 and 5 had different effects on each equation. For men, scores on Anxiety were significantly related to objective career success ( $\beta = -.25, t = -2.78, P < .01$ ). The amount of variance accounted for by the model was increased by 5%. However, neither mentoring nor networking survived the stepwise procedure and none of them was included in the equation. For women, none of the personality factors was included in the equation. Of the block which includes mentoring and networking, networking was included in the equation ( $\beta = .15, t = 2.61, P < .01$ ) and increased the amount of variance accounted for by the model by 2%. The models were significant for both genders ( $F(8, 62) = 10.41, P < .001$ , for men and  $F(9, 180) = 17.28, P < .001$ , for women). They accounted for 52% and 44% of the total variance in the objective career success of men and women, respectively.

The results suggest different models of predictors of objective career success for each gender, at least with respect to personality, mentoring and networking. For men, personality played a more important role. For women, it was only networking that was related to objective career success, and neither the personality factors nor mentoring were related to it.

#### *The Relationship of Subjective Career Success with Personality, Mentoring and Networking*

The results of the hierarchical regressions with subjective career success as criterion are presented in Tables 13 and 13.1, for the whole sample and by gender, respectively.

For the whole sample, blocks 1 and 2 did not account for any amount of variance in scores on subjective career success. Work involvement accounted for a substantial amount of variance in scores on subjective career success ( $\beta = .23, t = 4.11, P < .001$ ). Anxiety ( $\beta = -.19, t = -3.66, P < .001$ ) and Independence ( $\beta = -.13, t = -2.53, P < .05$ ) were the personality factors

Table 13: Hierarchical regression (forcible entry for blocks 1, 2, 3 and stepwise for blocks 4 and 5) with subjective career success as criterion ( $n = 272$ ).

Variable	$\beta$	$R^2$	$\Delta R^2$	$t$
Age	0			-.05
Education	.02			.30
Social class	-.07			-1.31
Marital status	.05			.90
		0		
Initial Grade	-.02			-.29
Tenure	-.01			-.09
		0	0	
Work Involvement	.23			4.11 <sup>a</sup>
		.16	.16	
Anxiety	-.19			-3.66 <sup>a</sup>
Independence	-.13			-2.53 <sup>c</sup>
		.20	.04 <sup>c</sup>	
Mentoring	.47			8.66 <sup>a</sup>
		.38 <sup>b</sup>	.18 <sup>b</sup>	

$F(10, 253) = 17.12$  <sup>a</sup>

Adjusted  $R^2$  values are presented <sup>a</sup>  $P < .001$  <sup>b</sup>  $P < .01$  <sup>c</sup>  $P < .05$

Table 13.1: Hierarchical regression (enter for blocks 1, 2, 3 and stepwise for blocks 4 and 5) with subjective career success as criterion by gender.

Variable	Men ( <i>n</i> = 73)				Women ( <i>n</i> = 199)			
	$\beta$	$R^2$	$\Delta R^2$	<i>t</i>	$\beta$	$R^2$	$\Delta R^2$	<i>t</i>
Age	.04			.30	.01			.12
Education	.01			.10	0			0
Social class	-.08			-.90	-.06			-.89
Marital status	.21			2.24 <sup>c</sup>	.01			.16
Initial Grade		0			.01	.01		.01
Tenure	-.16			-1.36	.09			1.22
Work Involvement		0			.08			1.04
Anxiety	.36			3.43 <sup>b</sup>	.01	0		2.46 <sup>c</sup>
Mentoring		.24			.17			2.46 <sup>c</sup>
	-.23			-2.49 <sup>c</sup>	.13	.12		-2.41 <sup>c</sup>
		.27			-.15			-2.41 <sup>c</sup>
	.48			4.91 <sup>a</sup>	.14	.01		7.03 <sup>a</sup>
		.47 <sup>b</sup>			.47			7.03 <sup>a</sup>
					.32 <sup>b</sup>	.18 <sup>b</sup>		7.03 <sup>a</sup>

$F(9, 62) = 7.90^a$

Adjusted  $R^2$  values are presented <sup>a</sup>  $P < .001$  <sup>b</sup>  $P < .01$  <sup>c</sup>  $P < .05$

$F(9, 183) = 10.93^a$

which were included in the equation. They increased the amount of variance accounted for by a significant 4% ( $F(2, 254) = 6.35, P < .01$ ). From the block of networking and mentoring, mentoring was included in the equation ( $\beta = .47, t = 8.66, P < .001$ ). It increased the amount of variance accounted for by the model by 18%. The model accounted for 38% of the total variance ( $F(10, 253) = 17.12, P < .001$ ). The results suggest that Anxiety and Independence, among the personality traits, and mentoring, among the inter-personal variables, contribute to subjective career success.

Analysis by gender, revealed patterns of relationships which were consistent with the general model. Furthermore, the two gender-specific models were consistent with each other.

For both, men and women, the human capital variables included in blocks 1 and 2 made no contribution to the total variance accounted for. In both models, work involvement was significantly related to subjective career success. Scores on Anxiety were related to scores on subjective career success in both the men's model ( $\beta = -.23, t = -2.49, P < .05$ ) and the women's model ( $\beta = -.15, t = -2.41, P < .05$ ). Scores on Anxiety increased the amount of variance accounted for by 3% in the men's model and by 1% in the women's model. Scores on mentoring were strongly related to scores on subjective career success in the models for both men ( $\beta = .48, t = 4.91, P < .001$ ) and women ( $\beta = .47, t = 7.03, P < .001$ ). Mentoring increased the amount of variance accounted for by 20% in the men's model and by 18% in the women's model. Networking was not included in any model. The models explained 47% of the total variance in men's subjective career success ( $F(9, 62) = 7.90, P < .001$ ) and 32% of the total variance in women's subjective career success ( $F(9, 183) = 10.93, P < .001$ ).

These results suggest that Anxiety is related to subjective career success for both genders and mentoring is a very good predictor of subjective career success for both genders. Networking does not contribute to subjective career success for any gender, at least when it is considered along with mentoring.

#### *Comments on the Regression Models for Objective and Subjective Career Success*

If a comparison between the models derived for objective career success and subjective career success is attempted the following suggestions can be made: (a) The human capital variables, especially those relevant to the organisation (i.e., initial grade and tenure), make substantial contributions to the models for objective career success, but they make no contribution to the models for subjective career success. Work involvement contributes to both models; (b) In general, there seems to be a differential relationship for networking and

mentoring with objective career success and subjective career success. Networking is more strongly related to objective career success than mentoring is. On the other hand, mentoring is more strongly related to subjective career success than networking is; (c) Anxiety seems to relate mainly to subjective career success, while Independence also relates to subjective career success. "Personality" is a better predictor for subjective career success than it is for objective career success; (d) In general, the subjective career success models derived for each gender are consistent with each other, whilst a discrepancy in the models for objective career success seems to exist. The models for each gender seem to be generally consistent with the general models.

#### *The Relationship of Provision of Mentoring with Career Success*

Hierarchical regression was also used to investigate the relationship between scores on provision of mentoring and career success. It is reminded that only respondents who indicated being in grade 5 and above were included in the analyses.

The variables were entered into the equations in the following blocks: Block 1: age, education, social class, marital status; Block 2: initial grade and tenure; Block 3: work involvement; Block 4: personality factors (Anxiety, Extraversion, Independence, Self-Control, Tough-Mindedness); Block 5: provision of mentoring. The variables in blocks 1, 2 and 3 were entered into the equation with forceful entry. The stepwise procedure was used for blocks 4 and 5. The reasons for the choice of these methods have already been underlined. Furthermore, use of this order and method of entrance offers consistency and uniformity in the procedures across all regressions where objective and subjective career success are the criterion variables.

The results of the regression analysis with objective career success as criterion are presented in Tables 14 and 14.1, for the whole sample ( $n = 104$ ) and by gender, respectively.

Provision of mentoring was not included in the general equation. Unlike the analysis which included all the respondents regardless of grade, scores on Independence were included in the equation ( $\beta = .14, t = 2.33, P < .05$ ).

Scores on provision of mentoring were included neither in the equation for men nor in the equation for women. Regarding the personality factors, Anxiety ( $\beta = -.22, t = -2.20, P < .05$ ) was included in the model for men and Independence ( $\beta = .17, t = -2.43, P < .05$ ) was included in the model for women.

The results of the regression analysis with scores on subjective career success as criterion are presented in Tables 15 and 15.1, for the whole sample ( $n = 104$ ) and by gender, respectively.



Table 14: Hierarchical regression (forcible entry for blocks 1, 2 and 3 and stepwise for blocks 4 and 5) for the effects of provision of mentoring on objective career success ( $n = 104$ ).

Variable	$\beta$	$R^2$	$\Delta R^2$	$t$
Age	.03			.43
Education	.08			1.23
Social class	-.04			-.71
Marital status	.03			.46
		.01		
Initial Grade *	-.65			-8.69 <sup>a</sup>
Tenure	.28			3.24 <sup>b</sup>
		.66	.65	
Work involvement	.11			1.76
		.67	.01	
Independence	.14			2.33 <sup>c</sup>
		.69 <sup>b</sup>	.02	
Provision of Mentoring	-.02			-.32 (did not enter the equation)

$F(8, 92) = 28.44$  <sup>a</sup>

Adjusted  $R^2$  values are presented <sup>a</sup>  $P < .001$  <sup>b</sup>  $P < .01$  <sup>c</sup>  $P < .05$

\* Estimations are based on logarithmic values

Table 14.1 : Hierarchical regression for the effects of provision of mentoring on objective career success by gender (forcible entry for blocks 1, 2 and 3 and stepwise for blocks 4 and 5).

Variable	Men ( <i>n</i> = 43)				Women ( <i>n</i> = 61)			
	$\beta$	$R^2$	$\Delta R^2$	<i>t</i>	$\beta$	$R^2$	$\Delta R^2$	<i>t</i>
Age	.11			.81	-.04			-.46
Education	.07			.65	.14			1.94
Social class	-.05			-.53	-.01			-.14
Marital status	-.03			-.34	.10			1.45
Initial Grade *		0				0		
Tenure	-.69			-5.41 <sup>a</sup>	-.62			-7.27 <sup>a</sup>
	.11			.69	.40			4.36 <sup>a</sup>
Work Involvement		.59	.59			.72	.72	
	.22			2.00	.10			1.35
Anxiety		.62	.03			.74	.02	
	-.22			-2.20 <sup>c</sup>				
Independence		.65 <sup>b</sup>	.03					
					.17			-2.43 <sup>c</sup>
Provision of Mentoring						.76 <sup>b</sup>	.02	
	-.03			-2.27				
	(not included in the equation)							
					.03			.40
	(not included in the equation)							

$F(8, 33) = 10.71$ <sup>a</sup>

Adjusted  $R^2$  values are presented <sup>a</sup>  $P < .001$  <sup>b</sup>  $P < .01$  <sup>c</sup>  $P < .05$

$F(8, 50) = 24.14$ <sup>a</sup>

Table 15: Multiple regression for the effects of provision of mentoring on subjective career success ( $n = 104$ ) (forcible entry for blocks 1 and 2 and stepwise for blocks 3 and 4).

Variable	$\beta$	$R^2$	$\Delta R^2$	$t$
Age	.01			.10
Education	0			.02
Social class	-.16			-1.67
Marital status	.12			1.22
		0		
Initial Grade	-.21			-1.65
Tenure	-.12			-.88
		0	0	
Work involvement	.42			4.22 <sup>a</sup>
		.14	.14	
Personality factors	(none entered the equation)			
Provision of Mentoring	.17			1.66 (did not enter the equation) ( $P < .11$ )

$F(7, 95) = 3.35$ <sup>b</sup>

Adjusted  $R^2$  values are presented <sup>a</sup>  $P < .001$  <sup>b</sup>  $P < .01$  <sup>c</sup>  $P < .05$

Table 15.1: Hierarchical regression for the effects of provision of mentoring on subjective career success by gender (forcible entrance for blocks 1, 2 and 3 and stepwise for blocks 4 and 5).

Variable	Men ( <i>n</i> = 43)				Women ( <i>n</i> = 61)			
	$\beta$	$R^2$	$\Delta R^2$	<i>t</i>	$\beta$	$R^2$	$\Delta R^2$	<i>t</i>
Age	.05			.23	.05			.33
Education	-.04			-.22	-.02			-.15
Social class	-.18			-1.19	-.14			-1.07
Marital status	.10			.64	.20			1.45
Initial Grade	-.34	0		-1.67	0	0		-.02
Tenure	-.32	0	0	-1.30	.11	0	0	.63
Work Involvement	.53	.14	.14	3.14 <sup>b</sup>	.35	.08	.08	2.62 <sup>c</sup>
Personality								
					(no factor was included in the equations)			
Provision of Mentoring	.11			.61	.13			.93
					(not included in the equation)			

$F(7, 35) = 1.97$  (*ns*)<sup>d</sup>

Adjusted  $R^2$  values are presented <sup>a</sup>  $P < .001$  <sup>b</sup>  $P < .01$  <sup>c</sup>  $P < .05$  <sup>d</sup>  $P < .10$

$F(7, 52) = 1.70$  (*ns*)

Provision of mentoring was not included in the general equation. Furthermore, none of the personality factors was included in equation.

Provision of mentoring was not included in any of the gender-specific equations either. The same held for the personality factors. Only Anxiety approached the significance level for entry in the women's model ( $\beta = -.22, t = -1.69, P < .10$ ).

Considering the above negative results, it can be suggested that the contribution of work involvement shadowed the contribution of provision of mentoring and the personality factors to objective and subjective career success. The correlation coefficients between the personality factors and work involvement are low. However, considering the rather sizeable correlations between provision of mentoring and work involvement (median of .42 with range from .38 to .45), the implication is that provision of mentoring was not included in any of the hierarchical regressions for the prediction of career success because work involvement was entered before provision of mentoring. To test this suggestion the same regressions omitting work involvement were conducted. The models that were derived were more supportive of the speculated relationship between provision of mentoring and subjective career success. In particular, provision of mentoring made a significant contribution to the general model for subjective career success ( $\beta = .29, t = 2.97, P < .01; F(8, 94) = 2.74, P < .01$ ). Its contribution to the models for women respondents ( $\beta = .22, t = 1.64, P < .11; F(8, 51) = 1.57, ns$ ), and for men respondents ( $\beta = .29, t = 1.56, ns; F(7, 35) = .82, ns$ ) was not significant, but it approached it. Considering objective career success, omission of work involvement did not change the pattern of the models. Provision of mentoring neither made any significant contribution nor did it approach it ( $\beta = .02, t = .29, ns; F(9, 91) = 25.60, P < .001$ , for the general model;  $\beta = .06, t = .87, ns; F(8, 50) = 23.52, P < .001$ , for women respondents;  $\beta = .05, t = .42, ns; F(8, 33) = 9.18, P < .001$ , for men respondents). This could be also partly attributed to the substantial contribution to the models for objective career success that was made by the control variables. Nevertheless, the patterns yielded by the above regressions are in line with the expectation that provision of mentoring should be more strongly related to subjective career success than to objective career success.

#### *The Relationship of Personality with Mentoring, Networking and Provision of Mentoring*

To investigate the relationships between mentoring, networking, provision of mentoring and the personality factors hierarchical regressions with mentoring, networking and provision of mentoring as criteria variables were conducted

The composition of each of the control blocks was identical to that in the previous regressions, namely: Block 1; age, education, social class, marital status; Block 2: initial grade, tenure; Block 3: work involvement. Block 4 included the five personality factors: Anxiety, Extraversion, Independence, Self-Control, Tough-Mindedness. The method of forcible entry into the equation was used for blocks 1, 2 and 3. The stepwise procedure was used for block 4. Logic and research suggest that organisational grade should relate to mentoring and networking (Drory & Romm, 1988). However, although data on the current grade of the respondents were available, the use of the combination of initial grade and tenure was preferred from grade. Initial grade relates to the opportunities to be mentored and to provide mentoring. Tenure mainly relates to the time available to build relationships with others in the organisation (Fagenson, 1988). Use of initial grade and tenure offers the quality of continuity rather than the “snapshot” quality of grade, hence, improving the likelihood to capture more of the effects of organisation-specific human capital on mentoring and networking.

#### *Mentoring and Personality*

The results of the regressions with mentoring as criterion are presented in Tables 16 and 16.1, for the whole sample and by gender, respectively.

Independence ( $\beta = -.15$ ,  $t = -2.42$ ,  $P < .05$ ) and Tough-Mindedness ( $\beta = -.19$ ,  $t = -2.93$ ,  $P < .01$ ) were included in the model. The combination of the two personality factors increased the amount of variance accounted for by the model by as significant 3% ( $F(2, 254) = 4.76$ ,  $P < .01$ ). The model accounted for 20% of the total variance ( $F(9, 254) = 8.17$ ,  $P < .001$ ).

The models derived for each gender were substantially different from the general model. In the model for men, Self-Control ( $\beta = -.32$ ,  $t = -2.47$ ,  $P < .05$ ) was included in the equation. It increased the amount of variance accounted for by 7% ( $F(8, 63) = 3.06$ ,  $P < .01$ ). Tough-Mindedness approached significance ( $\beta = -.22$ ,  $t = -1.71$ ,  $P < .10$ ), but it was not included in the final model. Running the same analysis, however, but only with Tough-Mindedness included in the block of the personality factors, the final model did include Tough-Mindedness ( $\beta = -.29$ ,  $t = 2.46$ ,  $P < .05$ ). None of the personality factors was included in the equation for women, and none approached significance.

#### *Networking and Personality*

The results of the regressions in the case of networking are presented in Tables 17 and 17.1, for the whole sample and by gender, respectively.

Table 16: Mentoring regressed on the personality factors (forcible entry for blocks 1, 2 and 3, stepwise for the block which includes the personality factors) ( $n = 272$ ).

Variable	$\beta$	$R^2$	$\Delta R^2$	$t$
Age	-.13			-1.69
Education	.04			.56
Social class	.12			2.13 <sup>c</sup>
Marital status	.09			1.38
		.02		
Initial grade	-.09			-1.38
Tenure	.01			.14
		.02	0	
Work Involvement	.40			7.01 <sup>a</sup>
		.17	.15	
Independence	-.15			-2.42 <sup>c</sup>
Tough-Mindedness	-.19			-2.93 <sup>b</sup>
		.20 <sup>b</sup>	.03	

$F(9, 254) = 8.17^a$

Adjusted  $R^2$  values are presented <sup>a</sup>  $P < .001$  <sup>b</sup>  $P < .01$  <sup>c</sup>  $P < .05$

Table 16.1: Mentoring regressed on personality by gender (forcible entry for blocks 1, 2 and 3 and stepwise for the block which includes the personality factors).

Variable	Men ( <i>n</i> = 73)				Women ( <i>n</i> = 199)			
	$\beta$	$R^2$	$\Delta R^2$	<i>t</i>	$\beta$	$R^2$	$\Delta R^2$	<i>t</i>
Age	.03			.22	-.12			-1.25
Education	.02			.11	.05			.7
Social class	.03			.23	.16			2.43 <sup>c</sup>
Marital status	-.05			-.44	.11			1.47
Initial grade tenure	.03			.21	-.10			-1.3
	.13			.80	-.02			-.24
Work involvement		.02	0			.02	0	
	.44			3.60 <sup>a</sup>	.39			5.75 <sup>a</sup>
Self-Control		.12	.10			.17 <sup>b</sup>	.15	
	-.32			-2.47 <sup>c</sup>	(no personality factor was included)			
		.19	.07					

 $F(8, 63) = 3.06$ <sup>b</sup>Adjusted  $R^2$  values are presented <sup>a</sup> $P < .001$  <sup>b</sup> $P < .01$  <sup>c</sup> $P < .05$  $F(7, 184) = 6.48$ <sup>a</sup>



Table 17: Networking regressed on personality factors (forcible entry for blocks 1, 2 and 3, stepwise for the block which includes the personality factors) ( $n = 272$ ).

Variable	$\beta$	$R^2$	$\Delta R^2$	$t$
Age	-.09			-1.09
Education	.12			1.75
Social class	.01			.23
Marital status	.07			1.07
		0		
Initial grade	-.17			-2.36 <sup>c</sup>
Tenure	.15			1.97
		.03	.03	
Work involvement	.22			3.56 <sup>a</sup>
		.08	.05	
Extraversion	.20			3.26 <sup>b</sup>
		.11 <sup>c</sup>	.03 <sup>c</sup>	

$F(8, 255) = 5.14^a$

Adjusted  $R^2$  values are presented <sup>a</sup>  $P < .001$  <sup>b</sup>  $P < .01$  <sup>c</sup>  $P < .05$

Table 17.1: Networking regressed on the personality factors by gender (forcible entry for blocks 1, 2 and 3 and stepwise for blocks 4 and 5).

Variable	Men ( <i>n</i> = 73)				Women ( <i>n</i> = 199)			
	$\beta$	$R^2$	$\Delta R^2$	<i>t</i>	$\beta$	$R^2$	$\Delta R^2$	<i>t</i>
Age	-.02			-14	-.10			-1.41
Education	.16			1.18	.09			1.10
Social class	.22			1.87	-.05			-.68
Marital status	.10	.01		.80	.10			1.31
Initial Grade	-.32			-2.15 <sup>c</sup>	-.10			-1.21
Tenure	.10	.10		.60	.15	0		1.74
Work involvement	.09	.10	.10	.74	.23	0	.05	3.21 <sup>b</sup>
Self-Control					-.19	.08	.03 <sup>c</sup>	-2.61 <sup>b</sup>
(Extraversion								
	.21			1.76 <sup>d</sup>				

$F(7, 64) = 2.12$  (*ns*)<sup>d</sup>

Adjusted  $R^2$  values are presented <sup>a</sup>  $P < .001$  <sup>b</sup>  $P < .01$  <sup>c</sup>  $P < .05$  <sup>d</sup>  $P < .10$

$F(8, 183) = 3.17$ <sup>b</sup>

Extraversion was related to networking ( $\beta = .20, t = 3.26, P < .01$ ) and increased the amount of variance accounted for by a significant 3%. The model accounted for 11% of the total variance ( $F(8, 255) = 5.14, P < .001$ ).

The patterns found in the regressions by gender were different from the pattern in the general model. In the model for men, none of the personality factors was included in the equation, but Extraversion approached significance ( $\beta = .22, t = 1.76, P < .10$ ). In the model for women, Self-Control ( $\beta = -.20, t = -2.72, P < .01$ ) was included in the equation and increased the amount of variance accounted for by a significant 3%. Running the same analysis, however, but only with Extraversion in the “personality block”, a model with Extraversion included in it ( $\beta = .15, t = 2.14, P < .05$ ) was derived. A replication of this pattern occurred when Independence ( $\beta = .16, t = 2.26, P < .05$ ) was used in the place of Extraversion as the only factor in the “personality block”. These results suggest that both Extraversion and Independence when considered in isolation are related to networking among women respondents, above the control variables. This is a point to consult in the process of construction of the causal path models. The model accounted for 8% of the total variance ( $F(8, 183) = 3.24, P < .01$ ) in the scores of networking reported by women.

#### *Provision of Mentoring and Personality*

The results of the regressions for provision of mentoring are presented in Tables 18 and 18.1, for the whole sample and by gender, respectively.

Tough-Mindedness ( $\beta = -.23, t = -2.41, P < .05$ ) was the only personality factor which was included in the general equation. Tough-Mindedness increased the amount of variance accounted for by the model by a significant 4%. The model accounted for 22% of the total variance ( $F(8, 94) = 4.59, P < .001$ ).

None of the personality factors was included in the equations derived for the two genders. However, Tough-Mindedness approached significance in the model for men ( $\beta = -.30, t = 1.74, P < .10$ ).

#### *General Considerations on the Relationships of Personality with Mentoring, Networking and Provision of Mentoring*

In an attempt to draw some general conclusions on the basis of the above results, the following can be concluded:

Table 18: Provision of mentoring regressed on personality (forcible entry for blocks 1, 2 and 3 and stepwise for the block which includes the personality factors) ( $n = 104$ ).

Variable	$\beta$	$R^2$	$\Delta R^2$	$t$
Age	-.03			-.24
Education	-.02			-.21
Social class	-.12			-1.28
Marital Status	.04			.39
		.01		
Initial grade	.16			1.33
Tenure	.35			2.51 <sup>c</sup>
		.02	.01	
Work involvement	.40			4.28 <sup>a</sup>
		.18	.16	
Tough-Mindedness	-.23			-2.41 <sup>c</sup>
		.22 <sup>c</sup>	.04	

$F(8, 94) = 4.59^a$

Adjusted  $R^2$  values are presented <sup>a</sup>  $P < .001$  <sup>b</sup>  $P < .01$  <sup>c</sup>  $P < .05$

Table 18.1: Provision of mentoring regressed on the personality factors by gender (forcible entrance for blocks 1, 2 and 3 and stepwise for the block which includes the personality factors).

Variable	Men ( <i>n</i> = 43)				Women ( <i>n</i> = 61)			
	$\beta$	$R^2$	$\Delta R^2$	<i>t</i>	$\beta$	$R^2$	$\Delta R^2$	<i>t</i>
Age	.17			.88	-.02			-.14
Education	.10			.66	0			-.05
Social class	.05			.36	-.23			-1.75
Marital status	.21			1.47	-.09			-.64
Initial grade tenure	-.04	.15		-.20	.29	0		1.72
	.21			.93	.25			1.43
Work involvement	.36	.18	.03	2.30 <sup>e</sup>	.43	0	0	3.35 <sup>b</sup>
		.27	.09			.14	.14	
Personality factors (Tough-Mindedness)	(none was included in the equation)				(none was included in the equation)			
	-.30			-1.74 <sup>d</sup>				

$F(7, 35) = 3.21$  <sup>b</sup>

Adjusted  $R^2$  values are presented <sup>a</sup>  $P < .001$  <sup>b</sup>  $P < .01$  <sup>c</sup>  $P < .05$  <sup>d</sup>  $P < .10$

$F(7, 52) = 2.32$  <sup>e</sup>

(1) Scores on Independence and Tough-Mindedness relate to scores on mentoring when all respondents are considered. However, only the model derived for the men respondents could be considered as consistent with the general model. Although, Self-Control could be considered as a better alternative to Tough-Mindedness when men's responses are considered, the latter should be preferred over the former because it is included in the general model. Personality does not seem to play an important role in mentoring when women respondents are considered.

(2) Scores on Extraversion are related to scores on networking when all respondents are considered. This relationship, however, does not seem to be equally strong and consistent across genders. Nevertheless, Extraversion does seem to be related to networking in all the sub-groups and it does seem to be so in a much more consistent way than any other personality factor.

(3) Scores on Tough-Mindedness relate to scores on provision of mentoring when all respondents and when only men respondents are considered. No personality factor, however, seems to particularly relate to provision of mentoring when women respondents are considered.

The fact that there were some discrepancies across models with regard to the contribution of the personality factors on mentoring and provision of mentoring implies a moderating effect of gender when patterns of relationships between the personality factors with mentoring and provision are considered.

The next step, before the development of the causal path models, involves testing for statistical mediation of the relationship between personality and career success.

#### *7.4.2 TESTING FOR STATISTICAL MEDIATION*

To investigate for the mediating effects, especially those of mentoring and networking on the relationship between personality and objective career success the procedure suggested by Kenny and his colleagues (Baron & Kenny, 1986; Judd & Kenny, 1981) was followed. No strong expectation for the discovery of mediating effects in the strict statistical sense was held. Baron and Kenny (1986) noted that mediating effects should be expected to be found in cases where a strong relationship between the hypothesised predictor and the hypothesised criterion exists. No particularly strong relationships (taking into account both Tables of correlations and regression equations) were identified between the personality traits and the indices of objective and subjective career success. Nevertheless, it was decided to proceed in the testing for statistical mediation, according to the initial data analysis strategy. Furthermore, the path analytic technique does not allow for the use of control variables in the estimation of the causal model. Therefore, identification of mediating effects, after controlling for a number of control

variables, would strengthen the findings, as any of the identified mediating relationships would hold above the effects of a number of variables.

The procedure suggested by Kenny and his colleagues (Baron & Kenny, 1986; Judd & Kenny, 1981) requires three regression equations: (i) the mediator (in the present case mentoring and networking) is regressed on the predictor (in the present case the five personality traits). The contribution of the predictor (personality traits) must be significant; (ii) the criterion (in the present case career success) is regressed on the predictor (personality traits). The contribution of the predictor (personality traits) must be significant; (iii) the criterion (career success) is regressed on the mediator (mentoring and networking) and the predictor (personality traits). The contribution of the mediator (mentoring and networking) must be significant. For a mediating relationship to hold the contribution of the predictor (personality traits) in the equation derived in stage (iii) must be lower than its contribution in the equation yielded in stage (ii). Perfect mediation is considered to occur when the predictor variable bears no relationship to the criterion when the effects of the mediator are taken into account (stage (iii)).

#### *Stage (i)*

The equations required by stage (i) of the procedure have already been conducted and are presented in Tables 16/16.1 to 18/18.1, both for the whole sample and by gender.

Tables 16/16.1 contain the equations yielded when mentoring was regressed on personality. Considering all responses regardless of gender, the personality factors which were included in the equation increased the amount of variance accounted for by a significant 3% ( $\beta = -.15, t = -2.42, P < .05$  and  $\beta = -.19, t = -2.93, P < .01$ , for Independence and Tough-Mindedness, respectively). Considering the responses of men, the personality factor which was included in the equation, Self-Control, increased the amount of variance accounted for by a significant 7% ( $\beta = -.32, t = -2.47, P < .05$ ). In the equation derived for the women respondents no personality factor was included in the equation.

Tables 17/17.1 contain the equations yielded when networking was regressed on personality. In the equation derived for all respondents regardless of gender, the personality factor, Extraversion, which was included in the equation increased the amount of variance accounted for by a significant 3% ( $\beta = .20, t = 3.26, P < .01$ ). When the responses by men were considered, no personality factor was included in the equation. In the equation derived for women, the personality factor, Self-Control, which was included in the equation increased the amount of variance accounted for by a significant 3% ( $\beta = -.19, t = -2.61, P < .01$ ).

Tables 18/18.1 contain the equations yielded when provision of mentoring was regressed on personality (with respondents in grade 5 and above). When all respondents regardless of gender were considered, the personality factor, Tough-Mindedness, which was included in the equation increased the amount of variance accounted for by a significant 4% ( $\beta = -.23, t = -2.41, P < .05$ ). No personality factor was included in any of the equations when the responses by gender were considered.

*Stage (ii)*

The equations required by stage (ii) of the procedure have also been conducted in section 7.4.1. They are presented in Tables 12/12.1 to 15/15.1.

Tables 12/12.1 contain the equations yielded when objective career success was regressed on personality for the whole sample (all respondents regardless of grade). The condition for significant contribution by the predictor (personality) to the criterion (objective career success) is fulfilled only in the equation where the responses of men are taken into account. In this case the personality factor, Anxiety, which was included in the equation significantly increased the amount of variance accounted for by 5% ( $\beta = -.25, t = -2.78, P < .01$ ).

Tables 13/13.1 contain the equations yielded when subjective career success was regressed on personality for the whole sample (all respondents regardless of grade). The condition for significant contribution by the predictor (personality) to the criterion (subjective career success) is fulfilled in all equations. In the general equation, personality (Anxiety ( $\beta = -.19, t = -3.66, P < .001$ ) and Independence ( $\beta = -.13, t = -2.53, P < .05$ )) increased the percentage of variance accounted for by 4%. In the equation for men respondents, the personality factor, Anxiety, which was included in the equation increased the amount of variance accounted for by a significant 3% ( $\beta = -.23, t = -2.49, P < .05$ ). In the equation for women respondents, the personality factor, Anxiety, increased the amount of variance accounted for by a significant 1% ( $\beta = -.15, t = -2.41, P < .05$ ).

Tables 14/14.1 contain the equations derived when objective career success is regressed on personality for respondents in grade five and above. When responses regardless of grade were considered, the personality factor, Independence, which was included in the equation increased the amount of variance accounted for by a significant 2% ( $\beta = .14, t = -2.33, P < .05$ ). When responses of men were considered, the personality factor, Anxiety, which was included in the equation increased the amount of variance accounted for by a significant 3% ( $\beta = -.22, t = -2.20, P < .05$ ). When women's responses were considered, the personality factor, Independence,



which was included in the equation increased the amount of variance accounted for by a significant 2% ( $\beta = .17, t = -2.43, P < .05$ ).

Tables 15/15.1 contain the equations yielded when regressing subjective career success on personality for respondents in grade 5 and above. In no equation, either for all respondents regardless of gender or by gender, were any personality factors included.

### *Stage (iii)*

Career success was regressed on the control variables, followed by the mediators (mentoring, networking, provision of mentoring), with the predictors (personality traits) last. Both, the mediators and the predictors were entered into the equation using the stepwise procedure.

Using objective career success as criterion and considering the whole sample regardless of gender, none of the personality factors entered the equation after networking had entered ( $\beta = .14, t = 2.83, P < .01; F(8, 252) = 27.61, P < .001, \text{Adj.}R^2 = .450$ ). However, no mediating effect can be concluded because no personality factor was predictive of objective career success when no mediator was present at stage (ii). When men's responses were considered, neither mentoring nor networking were included in the equation. A personality factor, Anxiety, was included in the equation significantly increasing the amount of variance accounted for by 3.7% ( $\beta = -.22, t = -2.39, P < .05; F(8, 62) = 8.63, P < .001, \text{Adj.}R^2 = .521$ ). No mediation can be concluded, however, because no mediator (mentoring and/or networking) made a significant contribution to objective career success. When women's responses were considered, none of the personality factors entered into the equation after networking had entered ( $\beta = .17, t = 2.90, P < .01; F(8, 180) = 18.90, P < .001, \text{Adj.}R^2 = .432$ ). No mediation can be concluded, however, because no personality factor had made significant contribution to objective career success at stage (ii).

With subjective career success as criterion and considering all responses regardless of gender, the personality factors (Anxiety ( $\beta = -.17, t = -3.46, P < .001$ ) and Independence ( $\beta = -.11, t = -2.48, P < .05$ ) which were included in the equation increased the amount of variance accounted for by 3.2% ( $F(10, 253) = 16.95, P < .005, \text{Adj.}R^2 = .377$ ); mentoring ( $\beta = .47, t = 8.69, P < .001$ ) had already increased the variance accounted for from 15.9% to 34.5%. This increase was .08% less than the increase in stage (ii). This value, however, is below the 1% cut-off point suggested by Melamed (1996a), therefore, no mediation can be concluded. When men's responses were considered, the personality factor, Anxiety, which was included in the equation increased the amount of variance accounted for by a significant 2.8% ( $\beta = -.20, t = -2.1,$

$P < .05$ ;  $F(9, 62) = 7.53$ ,  $P < .001$ ,  $\text{Adj.}R^2 = .479$ ); mentoring had already increased the amount of variance accounted for from 23.7% to 45.1%. This increase was only .02% less than the increase in stage (ii), hence no mediating effect can be concluded. When women's responses were considered, the personality factor, Anxiety, which was included in the equation increased the amount of variance accounted for by a significant 1.8% ( $\beta = -.15$ ,  $t = -2.41$ ,  $P < .05$ ;  $F(9, 183) = 10.93$ ,  $P < .001$ ,  $\text{Adj.}R^2 = .319$ ); mentoring had already increased the variance accounted for from 12.6% to .30.1%. This amount was in fact more than the 1% found in stage (ii). Again, therefore, no mediating effect can be concluded.

To test for the mediating effects of provision of mentoring the same procedure was followed including only the respondents in grade 5 and above.

With objective career success as criterion, provision of mentoring did not enter the equation, either when responses regardless of gender [ $F(8, 92) = 28.44$ ,  $P < .001$ ,  $\text{adj.}R^2 = .687$ , all the variance accounted for by the control factors and the personality factor, Independence ( $\beta = .14$ ,  $t = 2.33$ ,  $P < .05$ ), which was included in the equation)]; or when responses by gender were considered [for men:  $F(8, 33) = 10.71$ ,  $P < .001$ ,  $\text{adj.}R^2 = .655$ , all the variance accounted for by the control factors and Anxiety ( $\beta = -.22$ ,  $t = 2.2$ ,  $P < .05$ ); and for women:  $F(8, 50) = 24.14$ ,  $P < .001$ ,  $\text{adj.}R^2 = .761$ ), all variance accounted for by the control factors and Independence ( $\beta = .17$ ,  $t = 2.43$ ,  $P < .05$ )]. Therefore, the condition regarding the significant contribution of the hypothesised mediator (provision of mentoring) was not fulfilled.

With subjective career success as criterion, the result was similar. Neither provision of mentoring nor any of the personality factors entered the equations; either when responses regardless of gender ( $F(7, 95) = 3.35$ ,  $P < .01$ ,  $\text{adj.}R^2 = .139$ ; all the variance accounted for by the control variables) or when responses by gender were considered [ $F(7, 35) = 1.97$ , *ns*,  $\text{adj.}R^2 = .139$  for men;  $F(7, 52) = 1.70$ , *ns*,  $\text{adj.}R^2 = .077$ , for women; all the variance accounted for by the control variables]. Therefore, the condition regarding the significant contribution of the hypothesised mediator (provision of mentoring) was not fulfilled.

#### *Comments on the Results of the Testing for Statistical Mediation*

The results from the investigation on mediating effects of mentoring/networking/provision of mentoring in the relationship between personality traits and career success are negative. However, as it was noted earlier, this result was expected given the comments by Baron and Kenny (1986) about the effectiveness of their suggested procedure.

The results can be attributed to two facts, which are not mutually exclusive: (a) the effects of the control variables shade the effects of the main variables of the study; (b) there are no mediating effects, at least in the strict statistical sense that was adopted in the above investigation. An additional account can be that the procedure which was employed in the present work is not very sensitive in cases where mediating effects occur among variables which are not strongly related to each other.

These considerations provide an additional reason to conduct causal path analysis. In the causal path analysis the relationships among the variables will be more clearly depicted. Of course, not taking into account the control variables may decrease confidence concerning the validity of the models. However, this is the trade-off for obtaining a clearer picture of the pattern of relationships among the main variables in the study.

## 7.5 PATH ANALYTIC MODELS

According to Pedhazur (1982, p. 580), causal path analysis (Wright, 1934) is a method “to shed light on the tenability of a causal model formulated by the researcher”. Causal path analysis can provide information concerning causal relationships by means of the estimation of the magnitudes of the relationships between variables (Asher, 1983). From relevant writings (e.g., Davis, 1985) it can be inferred that three conditions must be met for the relationship between two variables to be safely described as causal: (i) the variables must co-vary; (ii) the variables must be ordered temporally; (iii) no other factors are responsible for the observed co-variation. In the present work a causal path model is defined as a model which explicitly states and describes causality relationships between a set of variables.

The understanding and the description of groups of variables as causal models is the last step in analyses which are, at least partly, of an exploratory nature (Hartwig & Dearing, 1979). Furthermore, causal path analysis can partly overcome the most serious shortcoming of cross-sectional research designs because it can “provide a weak test of causal relationships” (Spector, 1981, p. 24). Therefore, causal path analysis is a necessary element in the present work.

The correct use of statistics occupy an important role in the development of a valid causal path model. The statistical analysis, however, consists only part of the procedure of causal path analysis. Causal path analysis can be used to test whether a theoretical causal model is consistent with the data obtained in the investigation (Bryman & Cramer, 1990; Hartwig & Dearing, 1979; MacDonald, 1977; Pedhazur, 1982). Alternative causal path models, however, may equally fit the data (e.g., Pedhazur, 1982; Tenbrunsel, *et al.*, 1995). Therefore, in non-

experimental research, causal path analysis by itself cannot prove the validity of a causal model (e.g., Asher, 1983). The other, and probably most important, part of the problem is the existence of adequate theory and logical assumptions and analyses regarding causality relationships among the variables included in the causal path model (e.g., Asher, 1983; Davis, 1985; MacDonald, 1977; Pedhazur, 1982). Therefore, for the path analytic technique to provide a valid causal model, substantive knowledge about what Davis (1985) calls “the real world” must exist.

Causal path analysis is not the only approach to the study of causal order. Causal path analysis, however, is considered superior to other approaches [e.g., elaboration, effects analysis (e.g., Alwin & Hauser, 1975), Simon-Blalock technique (e.g., Blalock, 1964)]. Causal path analysis provides all the information these approaches provide. In addition, it enables the disentanglement of the effects of the variables which intervene in the relationship between the causing and the effect variables (Davis, 1985). Thus, causal path analysis can provide information about the relative importance of the intervening variables.

The limitation of causal path analysis in comparison to the other causal order approaches is that it can be applied only when the data conform to the general linear model. Hence, it is limited to the use of certain statistical techniques, such as multiple linear regression, and the requirements to the type of data imposed by these techniques (Davis, 1985; Heise, 1975; MacDonald, 1977). However, this limitation does not impose problems in the present work, because it was shown that the present data can be described in terms of linear relationships. In fact, it has been noted that it is the above limitation, that causal path analysis can be applied only with data that conform to the specifications of the general linear model, that enables fine analyses of the relative effects of the causal variables (Asher, 1983).

#### *Recursive Causal Path Models and the Description of Social Reality*

The consideration of causal path analysis in the present work concerns only recursive causal path models. Recursive models include only unidirectional paths making the assumption that there is one-way causality relationship between the inter-connected variables. Some authors present causal path analysis as dealing only with recursive causal path models (e.g., Pedhazur, 1982). Some others, however, are less restrictive in the use of the term, and they include analysis of non-recursive models (e.g. Berry, 1984). The former approach is adopted in the present work. Therefore, in the context of the present work the term “causal path models” will be equivalent to the term “recursive causal path models”.

Recursive models may not, and usually do not, reflect social reality perfectly. This is one of the limitations of causal path models (e.g., Berry, 1984; Bryman & Cramer, 1990; Pedhazur, 1982). In the present work the direction of causality between the inter-connected variables in the models was decided on the basis of either theory or logical considerations. It is acknowledged that the causality relationships specified in the models represent oversimplifications of the actual inter-relationships between the variables. However, treating a bi-directional relationship between two variables as unidirectional does not constitute a great threat for the validity of the causal path model, provided that the variable where the causality relationship is initiated from is correctly identified (Davis, 1985). Furthermore, using non-recursive causal models, although it may be more realistic, can have serious disadvantages. One of these disadvantages relates to the fact that a non-recursive causal model may be proved nonidentified; nonidentification makes the determination of path coefficients, hence the determination and comparison of the relative effects of each variable, impossible (Berry, 1984). Finally, ordinary least squares regression cannot be used with nonrecursive causal path models (Asher, 1983; Berry, 1984).

#### *Conditions for Conducting Causal Path Analysis*

A number of assumptions underlie causal path analysis (e.g., Asher, 1983; Berry, 1984; MacDonald, 1977; Pedhazur, 1982). These conditions are imposed by the fact that the relationships between the variables included in the model must be linear; so statistical techniques that conform to the general linear model (e.g., linear regression analysis) can be used.

The conditions to be met when the general linear model is used (e.g., homoscedasticity, linearity) have already been dealt with. There is one condition, however, which requires some more consideration (e.g., Asher, 1983). It is the condition which requires residuals or “error” variables (indicated with  $e_i$  in the present work) not to be correlated with any of the prior variables in the causal path model; therefore, not to be correlated to each other (“uncorrelated residuals” condition). This condition is deduced to the assumption that all variables relevant to the situation described by the causal path model are included in it (e.g., Hartwig & Dearing, 1979; Pedhazur, 1982). To provide an illustration, in the present work this assumption would mean that all the factors related to networking that are not accounted for by the model are completely independent of all factors that are related to objective career success that are not accounted for by the model. Unfortunately, this assumption is almost always violated in social research (e.g., Asher, 1983; Berry, 1984). MacDonald (1977) briefly provides some comforting ways to deal with this assumption which “may well be at odds with our intuition” (MacDonald,

1977, p. 84) [e.g., interpreting the residuals as the representation of the randomness inherent in the world (MacDonald, 1977)].

The present study is no exception in terms of violation of the above condition. For instance, work involvement relates to the indices of career success, mentoring, networking and provision of mentoring, but none of the control variables, including work involvement, was considered in the causal path models. This leads to violation of the uncorrelated residuals condition. The main reason for not including knowingly relevant variables into the causal path models relates to the aims of the present work. What is aimed is the investigation and identification of the relationships between certain personality factors, mentoring, networking, provision of mentoring and indices of objective and subjective career success. To improve the validity of the investigation (including protection from specification error) it was considered necessary to include variables which are considered to affect the variables whose inter-relationships were aimed to be investigated. However, it was considered that the causal models should be restricted to the inclusion of the variables which constitute the purpose of the investigation. This reasoning relates to the parsimony of the models. Advance knowledge regarding the violation of this assumption was the main reason for which the hierarchical regressions, where control variables were included, were conducted. The results of the hierarchical regressions, where more conformity to the uncorrelated residuals condition existed, were taken into account in the development of the causal path models.

### *Path Coefficients*

The path coefficients (indicated as  $p_{ij}$ ) indicate the direct effect of the variables considered to be the causes on the variables considered to be the effects. Although there have been a number of attempts for a formal interpretation of the path coefficient these attempts are generally considered unsatisfactory (e.g., Asher, 1983; Duncan, 1970). Asher (1983) notes that the most realistic considerations of the path coefficient are that: (a) it involves comparisons of the relative magnitudes of the coefficients within the same model and (b) it provides information about the change in a variable which is caused by a specified change in another variable (Asher, 1983, pp. 46-47).

When multiple regression is used as the statistical analytic technique, the path coefficients from a number of variables considered to be the causes to a variable considered to be the effect are equal to the regression coefficients yielded by the multiple linear regression of the effect variable on the causal variables (e.g., Heise, 1975; Pedhazur, 1982). Therefore, causal path analysis can be executed by conducting a number of multiple linear regressions on the

variables under consideration (e.g., Asher, 1983; Berry, 1984; Davis, 1985; Heise, 1975; MacDonald, 1977; Pedhazur, 1982).

There is no theoretical restriction as to the type of the regression coefficient (i.e., unstandardised vs. standardised) appropriate for use in causal path analysis. Some authors suggest that use of unstandardised regression coefficients, or even of a combination of unstandardised and standardised coefficients, may be more advantageous in certain cases (e.g., comparisons across groups is the issue of interest) (e.g., Hotchkiss, 1976; MacDonald, 1977; Wright, 1960). This holds especially in cases where “true” effects, to employ MacDonald’s (1977) term, are measured (e.g., the effect of one year of additional education on starting salary levels). Considering the present work, however, none of the variables to be included in the path analytic models, apart from objective career success, have a “true” value for the path coefficients to indicate “true” effects. Furthermore, the present work aims at the development of a descriptive model about the structure of relationships among a number of variables, therefore, the relative effects are of primary importance. Asher (1983) suggests the use of standardised regression coefficients when the relative importance of the causal variables is the issue. For these reasons, standardised regression coefficients were used. Therefore,  $p_{ij} = \beta_{ij}$ ,  $i, j = 1, 2, \dots$ , where the indices  $i$  and  $j$  indicate the effect and causal variable, respectively.

It is unfortunate that in causal path analysis no control for variables outside the ones included in the causal model can be imposed (because this would violate the mathematical background on which causal path analysis is based). Therefore, it is likely that the relationships which will be identified in the regression equations for the development of the causal path models to follow different patterns from the corresponding relationships that were identified in the multiple hierarchical regressions conducted earlier.

Furthermore, as already seen, failure to include all the relevant variables in the path analytic model can lead to specification error which can lead either to bias in the regression coefficients (when the omitted variables relate to the causal variables), or to attenuation of the power of the statistical tests (when the omitted variables do not correlate with the causal variables) (e.g., Berry & Feldman, 1985; Pedhazur, 1982). Taking into account the results of the hierarchical regressions conducted in the first step of the analysis, the above can be the case for the estimation of the path coefficients of paths towards objective career success, networking and mentoring (only work involvement among the control variables was found to be related to subjective career success). This, of course, casts additional concerns on the validity of the causal path models. These concerns do not relate to the direction of causality between variables, but they do relate to the existence and relative strength of the paths between the variables.

Nevertheless, the results of the hierarchical regressions were taken into account in the development of the causal models.

### *Theory Trimming and Stepwise Regression*

The regressions for the identification of the causal paths were conducted using the stepwise procedure. The use of the stepwise procedure goes along with the theory trimming of causal path analysis. According to theory trimming, only path coefficients which meet the specified statistical significance criteria should be included in the path analytic model (Duncan, 1975; Heise, 1969). Furthermore, it can be inferred from the writings of a number of authors (e.g., MacDonald, 1977) that use of stepwise regression in the development of causal path models is recommended in cases where the investigation incorporates a substantial exploratory element, as in the present work.

An additional reason for using stepwise regression refers to the suggestion that the *t*-ratios in the regression equations are used to test for the significance of path coefficients (e.g., MacDonald, 1977; Pedhazur, 1982). Elimination from the equation of variables whose *t*-ratios do not meet the significance criterion changes the values of the standardised regression coefficients of the variables whose *t*-ratios meet the significance criterion. Stepwise regression “corrects” for this potential problem by including in the final equation only the variables whose ratios meet the specified significance criterion and, thereby, calculating the standardised regression coefficients accordingly.

On the other hand, however, theory trimming also advocates that the path analytic model should include only those paths that are meaningful on the basis of the theoretical background and logic which underlie the relationships among the variables included the model (meaningfulness criterion). Therefore, according to this line, even paths which meet the specified significance criterion should be deleted if their existence is not justified on the basis of the relevant theoretical considerations and logical assumptions. Pedhazur (1982) notes that the criterion of meaningfulness of a path becomes especially important when the sample size is large, a condition which increases the likelihood that a regression coefficient will be statistically significant. Regarding the present work, the last point may become of importance in the analyses in which data from all the respondents regardless of gender ( $n = 272$ ) and the female respondents ( $n = 199$ ) are included.

Despite its wide acceptance and use, however, theory trimming has its critics who consider that the significance of the standardised regression coefficients should not be a restrictive factor for the inclusion or deletion of paths in the model (e.g., McPherson, 1976). In



this line, paths whose path coefficients do not meet the specified significance criterion must be included in the model if there is underlying theory and logic (e.g., MacDonald, 1977). It appears, therefore, that although the theory trimming must be adhered to no “blind” reliance on it is advised, and the statistical significance criterion must not be the only criterion for inclusion of a path in the model.

Pedhazur (1982) advises for use of the  $F$ -statistic, along with the  $t$ -ratios, to test whether certain paths should be deleted. It is likely that a certain number of standardised regression coefficients are non-significant, yet the regression equation is significant. Use of this criterion is especially important in cases that conform to the situation described in the previous paragraph: where theory, previous research, and logic are used to decide whether certain paths whose betas do not meet the significance criterion should be included in the causal models. It is likely that this situation will be encountered in the present work.

#### *Summary of the Procedure for Path Identification*

The major guide for the formation of the path analytic models were the results of the stepwise regressions. Paths were included in the models if the relevant variables were included in the corresponding regression equations that were derived with the application of the stepwise procedure, in line with theory trimming. Also in line with theory trimming, it was decided that paths whose coefficients meet the significance criterion, but do not fit the theoretical and logical considerations, should not be included in the models. It was expected, however, that this case would be very rare. There is theoretical and logical background to support the vast majority of potential inter-relationships among the variables in the analysis. Similarly, it was considered that certain paths which do not meet the significance criterion, but they are sensible on the basis of previous research, theory and logic should be included in the models. Inclusion of such paths, however weak they are, in the models (provided that it does not impair the fit of the models with the data) could be proved helpful for another reason: it can illustrate the relative significance (or insignificance) of certain variables in relation to other variables (e.g., provision of mentoring in relation to networking or mentoring). Finally, the results of the multiple hierarchical regressions conducted in the first step, where use of the control variables was made, were consulted in the causal path model building process.

It can be inferred by the points raised by authors (e.g., Asher, 1983; MacDonald, 1977; Pedhazur, 1982) that this way of conducting path analysis is the appropriate in cases such as the present work. This investigation is carried out at a level where there is a certain theoretical background and prior empirical findings regarding part of the model (e.g., the relationship

between mentoring and subjective career success). There is, however, lack of theoretical considerations and lack of empirical results for other parts of the model (e.g., the relationship between certain personality variables and networking; or the relationship between networking and subjective career success).

#### 7.5.1 THE MODELS

The following causal path analytic models were developed:

(i) A model which includes personality factors, mentoring, networking, objective career success and subjective career success. Three models were developed: a general model (Figure 2.1), a model for the male respondents (Figure 2.2) and a model for the female respondents (Figure 2.3). The development of these models will test for the expectations regarding the relationships between variables, with the exception of the expectations where provision of mentoring is involved.

Path analysis calls for four regression equations for the development of each of the above models. Therefore, the following regressions were conducted: (a) subjective career success regressed on objective career success, networking, mentoring and the personality factors; (b) objective career success regressed on networking, mentoring and the personality factors; (c) networking regressed on mentoring and the personality factors; (d) mentoring regressed on the personality factors. Each regression was conducted three times, for all respondents, for men respondents and for women respondents. The results of the regressions are presented in Tables 19 to 21.

(ii) A model which adds provision of mentoring to the variables. Consequently, this model was developed on the basis of the data collected only from those respondents who indicated their current grade to be equal or greater to 5. Three models were also developed; a general model (Figure 3.1), a model for male respondents (Figure 3.2) and a model for female respondents (Figure 3.3). The development of these models will test for the expectations regarding the pattern of relationships which include provision of mentoring.

Path analysis requires five regression equations for the development of each of the above models. The following regressions were conducted: (a) subjective career success regressed on objective career success, provision of mentoring, networking, mentoring and the personality factors; (b) objective career success regressed on provision of mentoring, networking, mentoring and the personality factors; (c) provision of mentoring regressed on networking, mentoring and the personality factors; (d) networking regressed on mentoring and

Figure 2.1: Causal path model for all respondents regardless of gender

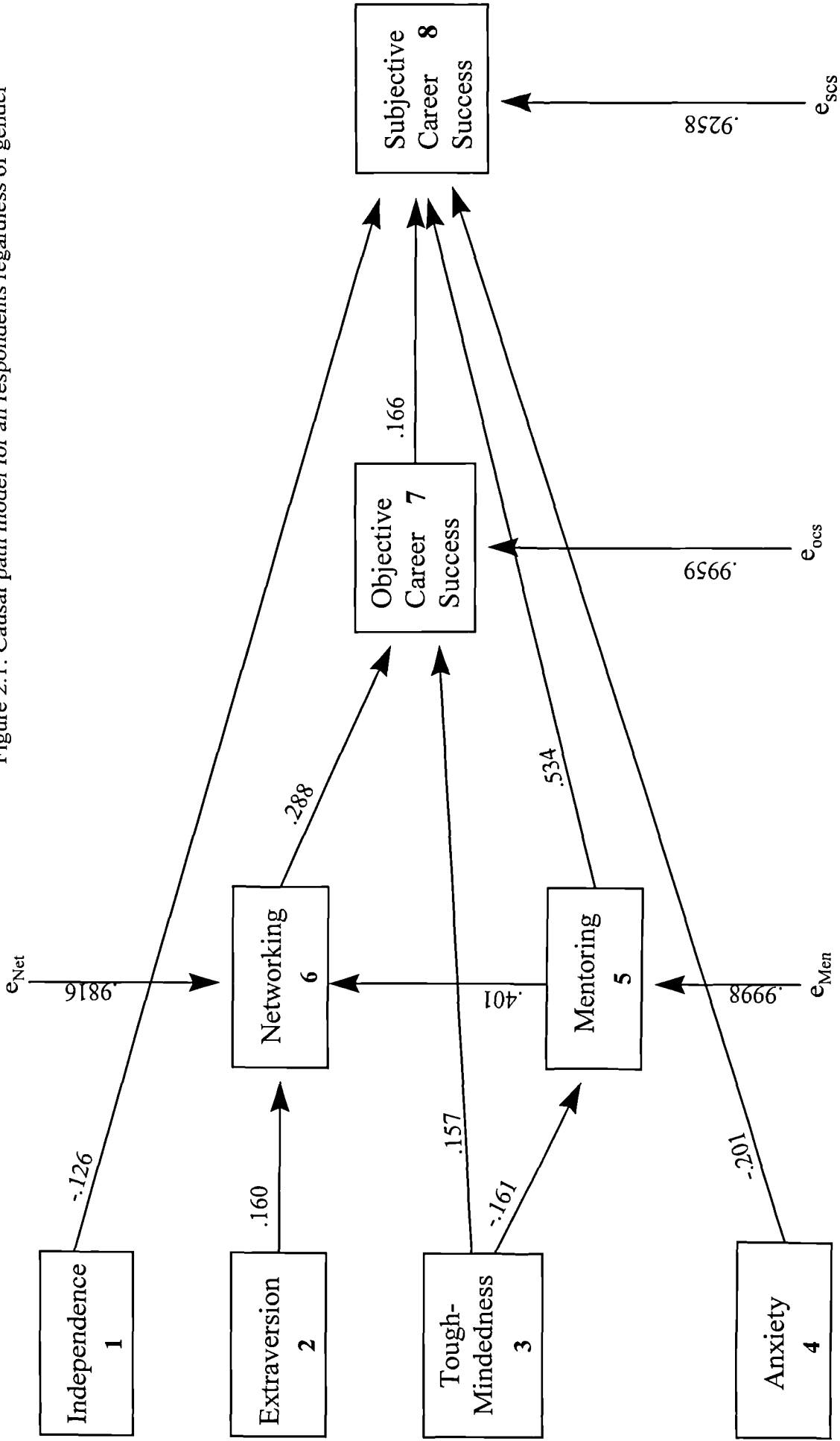


Figure 2.2: Causal path model for all men respondents

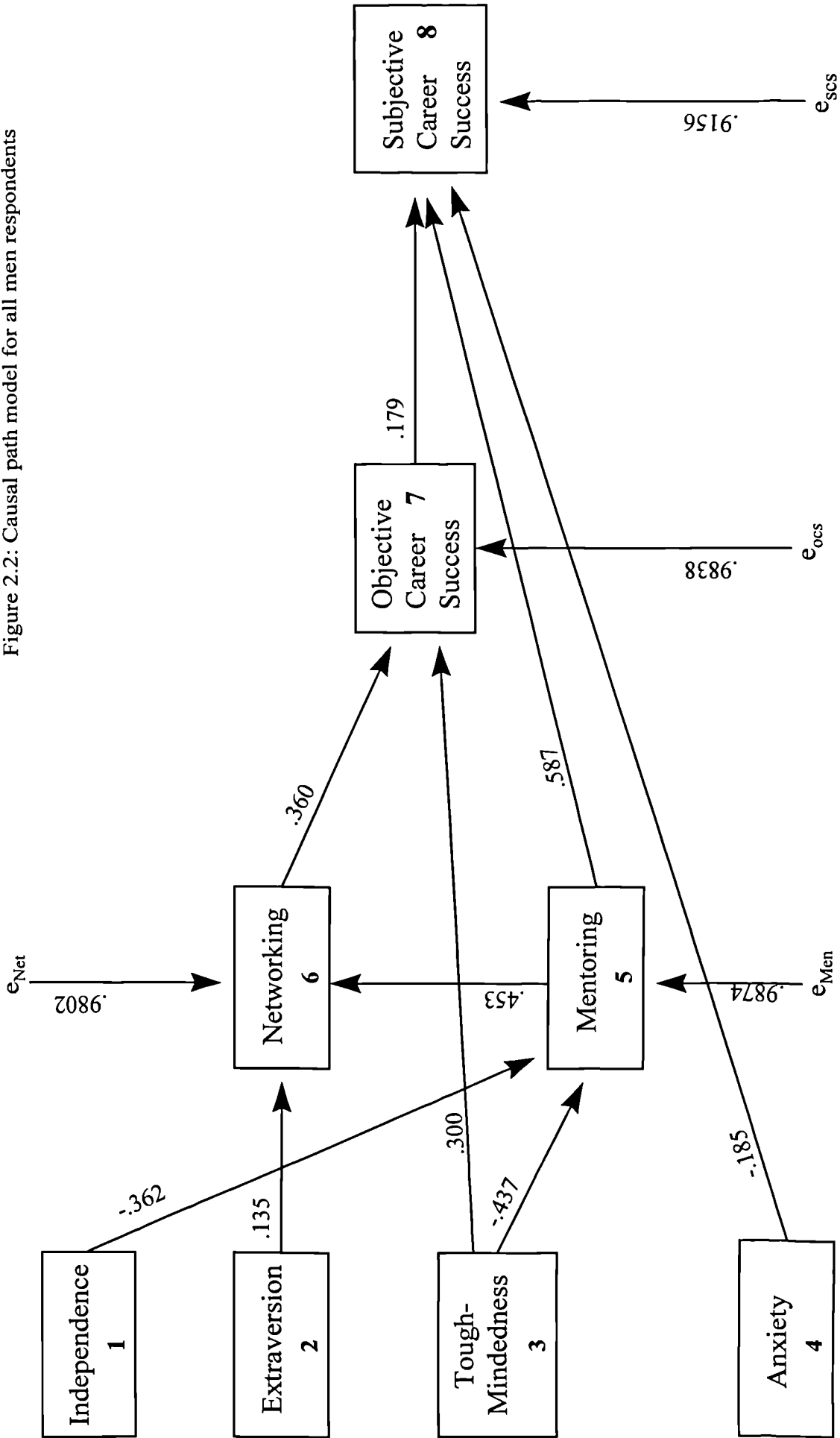


Figure 2.3: Causal path model for all women respondents

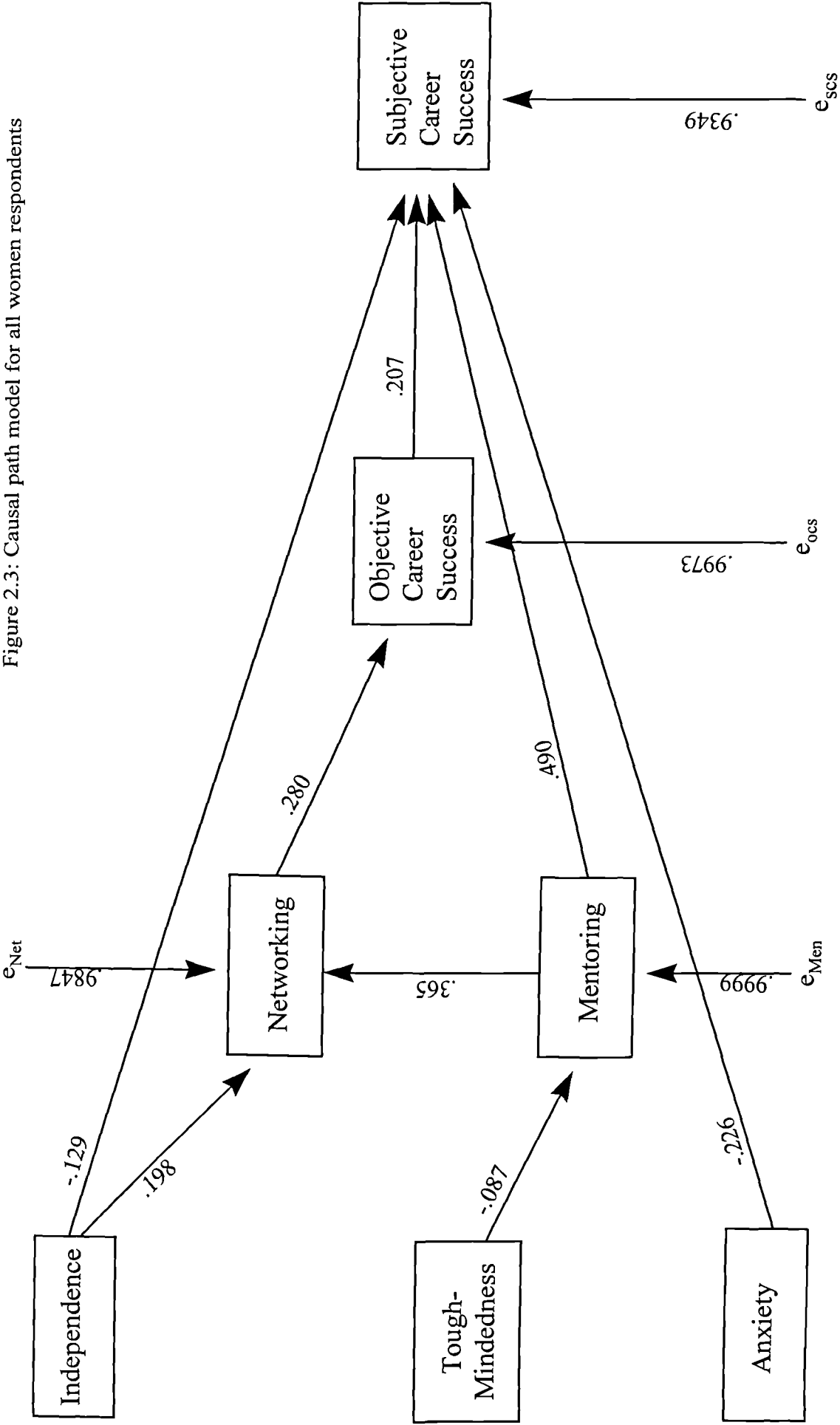


Figure 3.1: Causal path model for all respondents at grade 5 and above

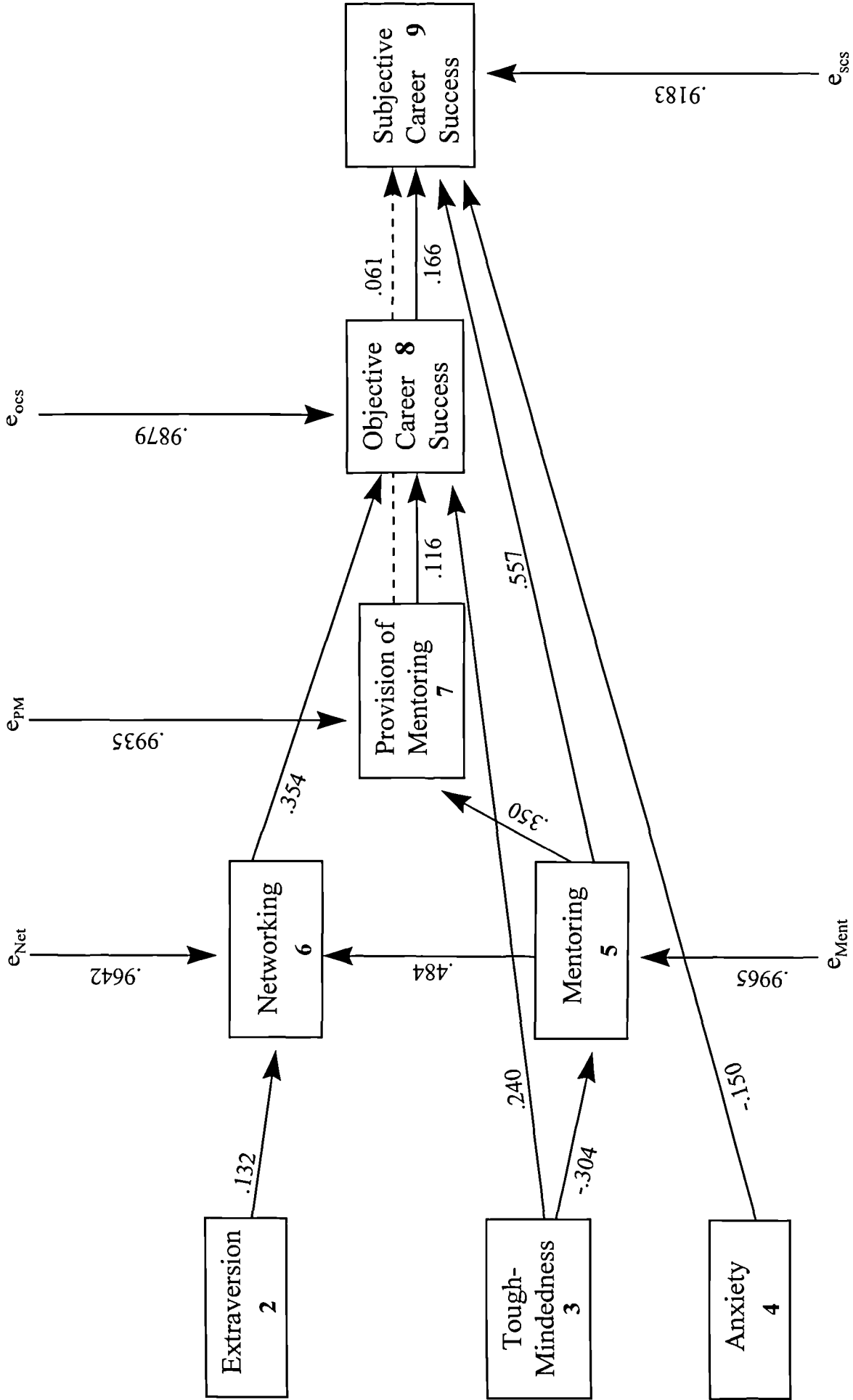


Figure 3.2: Causal path model for men respondents at grade 5 and above

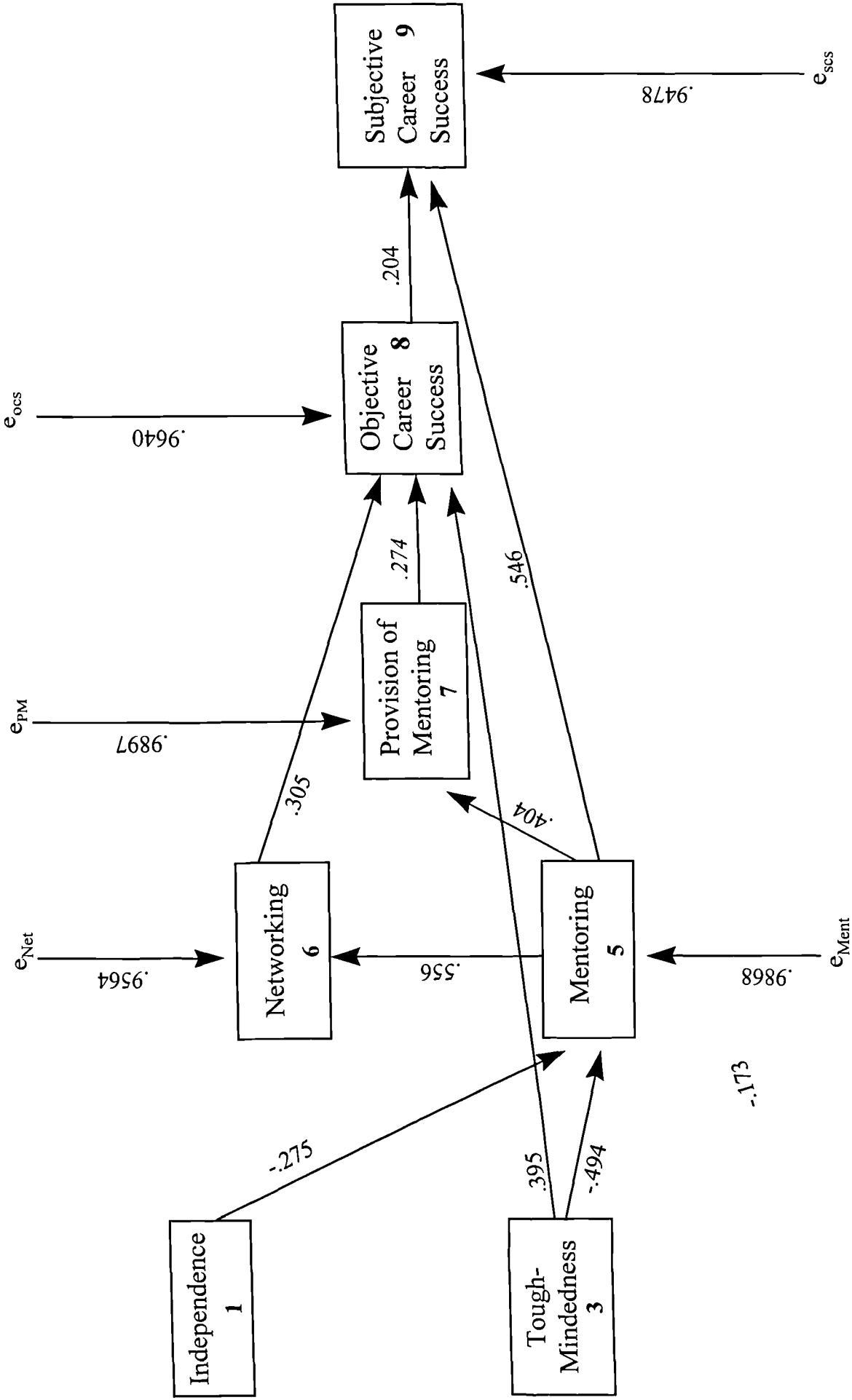


Figure 3.3: Causal path model for women respondents at grade 5 and above

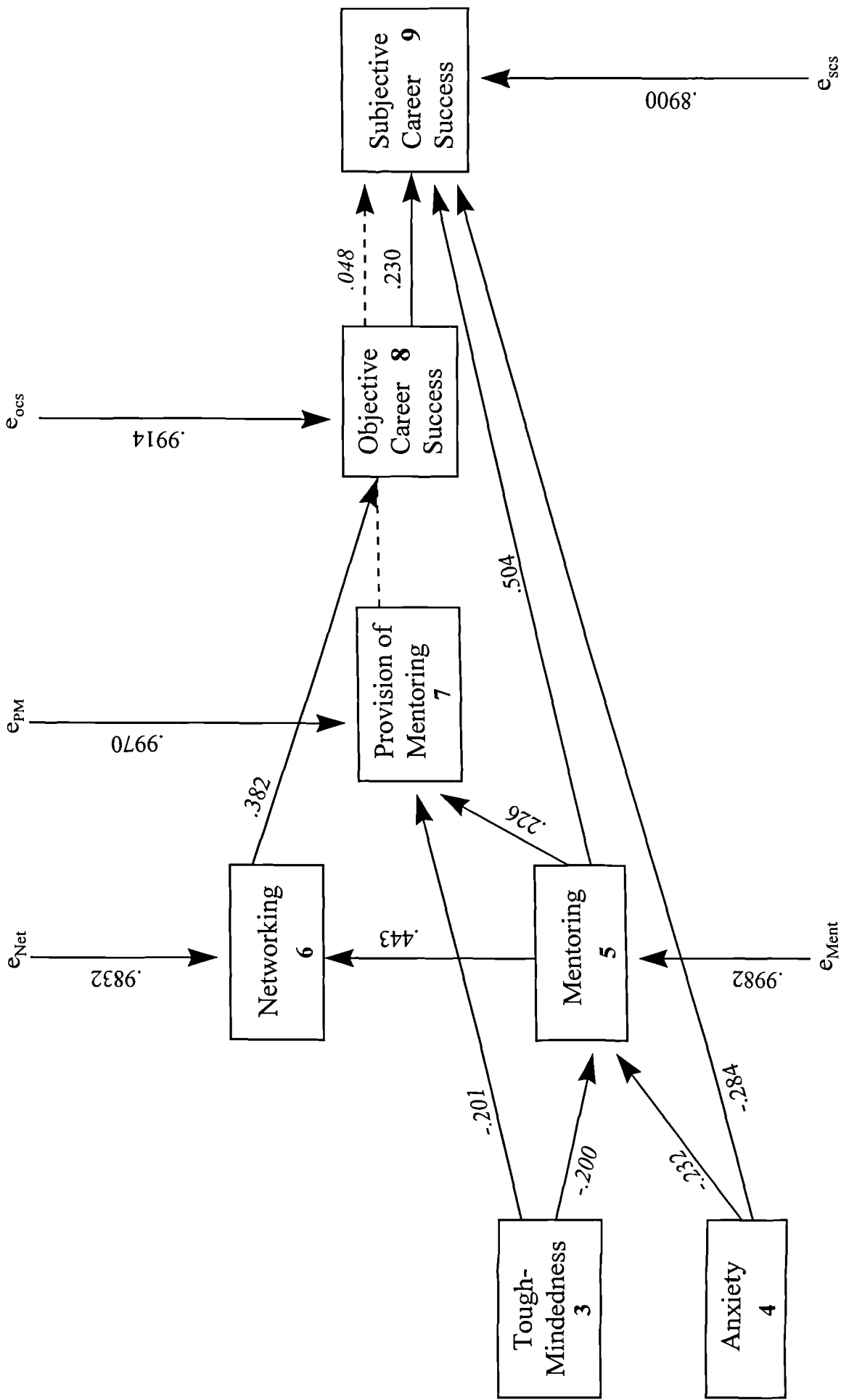




Table 19: Stepwise multiple regressions for the development of the path analytic model with all respondents included (figure 2.1) (only the variables which were included in the final equation are presented) ( $n = 272$ )

Variable	Criterion	$\beta$	$t$	$R^2$	$F$
	subjective career success				
Anxiety		-.201	-4.03 a		
Independence		-.126	-2.52 c		
Mentoring		.166	3.37 a		
Objective Career Success		.534	10.86 a		
	Objective career success			.3779 b	40.79 a
Tough-Mindedness		.157	2.65 b		
Networking		.288	4.46 a		
	Networking			.0906 b	14.04 a
Extraversion		.160	2.91 b		
Mentoring		.401	7.28 a		
	Mentoring			.1910 b	32.65 a
Tough-Mindedness		-.161	-2.66 b		
	Mentoring			.0223	7.10 b

Adjusted  $R^2$  values are presented a  $P < .001$  b  $P < .01$  c  $P < .05$

(Continued Table 19)

*F* and *R*<sup>2</sup> values for the corresponding just identified model.

Criterion	<i>R</i> <sup>2</sup>	<i>F</i>
Subjective career success	.3721	20.41 <sup>a</sup>
Objective career success	.0984	5.09 <sup>a</sup>
Networking	.1909	11.54 <sup>a</sup>
Mentoring	.0207	2.13 <i>ns</i>

<sup>a</sup> *P* < .001    <sup>b</sup> *P* < .01    <sup>c</sup> *P* < .05

Table 20: Stepwise multiple regressions for the development of the path analytic model in with all male respondents (figure 2.2) (only the variables which were included in the final equation are presented) ( $n = 73$ )

Variable	Criterion	$\beta$	$t$	$R^2$	$F$
	subjective career success				
Anxiety		-.185	-1.94 ( $p < .06$ )		
Mentoring		.587	6.25 <sup>a</sup>		
Objective Career Success		.179	1.87 ( $p < .07$ )	.4018 <sup>b</sup>	16.67 <sup>a</sup>
	Objective career success				
Tough-Mindedness		.300	2.76 <sup>b</sup>		
Networking		.360	3.31 <sup>b</sup>	.1785 <sup>c</sup>	8.61 <sup>a</sup>
	Networking				
Extraversion		.135	1.28 ( $p < .21$ )		
Mentoring		.453	4.29 <sup>a</sup>	.1977 <sup>b</sup>	9.87 <sup>a</sup>
	Mentoring				
Independence		-.362	-3.00 <sup>b</sup>		
Tough-Mindedness		-.437	-3.62 <sup>a</sup>	.1579 <sup>c</sup>	7.75 <sup>a</sup>

Adjusted  $R^2$  values are presented

(Continued Table 20)

*F* and non-adjusted *R*<sup>2</sup> values for the corresponding just identified model.

Criterion	<i>R</i> <sup>2</sup>	<i>F</i>
Subjective career success	.4431	6.17 a
Objective career success	.2603	3.17 b
Networking	.2323	3.33 b
Mentoring	.1955	3.26 c

a *P* < .001   b *P* < .01   c *P* < .05

Table 21: Stepwise multiple regressions for the development of the path analytic model which includes all women respondents (figure 2.3) (only the variables which were included in the final equation are presented) ( $n = 199$ )

Variable	Criterion	$\beta$	$t$	$R^2$	$F$
	subjective career success				
Anxiety		-.226	-3.79 a		
Independence		-.129	-2.16 c		
Mentoring		.490	8.30 a		
Objective Career Success		.207	3.51 a		
	Objective career success				
Networking		.280	4.03 a		
	Networking				
Independence		.198	3.02 b		
Mentoring		.365	5.59 a		
	Mentoring				
Tough-Mindedness		-.087	-1.21 ( $P < .23$ )		
	Mentoring				
				.0024	1.47

Adjusted  $R^2$  values are presented

(Continued Table 21)

*F* and non-adjusted *R*<sup>2</sup> values for the corresponding just identified model.

Criterion	<i>R</i> <sup>2</sup>	<i>F</i>
Subjective career success	.3698	13.42 a
Objective career success	.1004	2.93 b
Networking	.2014	7.94 a
Mentoring	.0120	.46 <i>ns</i>

a *P* < .001 b *P* < .01 c *P* < .05

the personality factors; (e) mentoring regressed on the personality factors. Each regression was conducted three times, for all respondents, for men respondents and for women respondents. The results of the regressions are presented in Tables 22 to 24. These models can be considered as referring to the middle and late career stages in the organisation, though the development of models for different career stages was outside the purposes of this work.

The personality factors are treated as exogenous variables, that is variables which are not affected by the other variables in the causal path model. Mentoring, networking, provision of mentoring, objective career success and subjective career success are treated as endogenous variables. Their variation is determined by the variation of other variables, exogenous and/or endogenous in the causal model (e.g., Asher, 1983; Berry, 1984; Bryman & Cramer, 1990; Pedhazur, 1982).

### *7.5.2 DATA FITTING OF THE CAUSAL PATH MODELS*

All the models are overidentified and inconsistent. A causal path model is defined as overidentified if the number of the regression equations exceed the number of path coefficients (or betas) to be identified (e.g., Asher, 1983). This is illustrated by the fact that not all the variables in the models are connected with paths (Figures 2.1 to 3.3). Lack of path corresponds to a path coefficient which equals zero. Inconsistency of a causal path model refers to the existence of components with opposite signs in certain paths (e.g., Davis, 1985). To illustrate, the path from Tough-Mindedness to subjective career success contains an arrow with a negative sign (connecting Tough-Mindedness with mentoring) and an arrow with a positive sign (connecting Tough-Mindedness with objective career success).

By their definition overidentified models allow testing for their significance (e.g., Pedhazur, 1982). A significant overidentified causal model fits the data. As already mentioned earlier, in cross-sectional research designs, fitting of an overidentified causal model with the data does not constitute proof for its validity. This is partly because different causal models for a specific set of variables can equally fit the data. This is the reason that the most vital issue in the development of a causal path model is the causal ordering of the variables which are included in it, an issue that is not addressed by testing for the significance of the model (e.g., Davis, 1985; Duncan, 1975). Therefore, consistency of a causal model with the data simply adds some support to the validity of the model; or, better, it temporarily alleviates concerns. Nevertheless, significance testing is a necessary part of the causal path analytic procedure.

Table 22: Stepwise multiple regressions for the development of the path analytic model with the respondents in grade 5 and above (figure 3.1)  
 (only the variables which were included in the final equation are presented) ( $n = 104$ )

Variable	Criterion	$\beta$	$t$	$R^2$	$F$
subjective career success					
Anxiety		-.150	-1.94 ( $p < .06$ )		
Mentoring		.557	6.69 a		
Objective Career Success		.166	2.12 c		
Provision of mentoring		.061	.73 ns		
Objective career success					
Tough-Mindedness		.240	2.54 c		
Networking		.354	3.69 a		
Provision of mentoring		.116	1.20 ( $p < .24$ )		
Provision of mentoring					
Mentoring		.350	3.77 a		
Networking					
Extraversion		.132	1.53 ( $p < .13$ )		
Mentoring		.484	5.61 a		
Mentoring					
Tough-Mindedness		-.304	-3.22 b		
				.0836 c	10.39 b

Adjusted  $R^2$  values are presented



(Continued Table 22)

*F* and non-adjusted *R*<sup>2</sup> values for the corresponding just identified model.

Criterion	<i>R</i> <sup>2</sup>	<i>F</i>
Subjective career success	.4392	8.01 a
Objective career success	.2040	2.98 b
Provision of mentoring	.1875	3.16 b
Networking	.2923	6.68 a
Mentoring	.1335	3.02 c

a *P* < .001 b *P* < .01 c *P* < .05

Table 23: Stepwise multiple regressions for the development of the path analytic model with the male respondents in grade 5 and above (figure 3.2) (only the variables which were included in the final equation are presented) ( $n = 43$ )

Variable	Criterion	$\beta$	$t$	$R^2$	$F$
subjective career success					
Mentoring		.546	4.23 a		
Objective Career Success		.204	1.58 ( $P < .13$ )		
Objective career success					
Tough-Mindedness		.395	2.93 b		
Networking		.305	2.20 c		
Provision of mentoring		.274	1.97 ( $P < .06$ )		
Provision of mentoring					
Mentoring		.404	2.83 b		
Networking					
Mentoring		.556	4.28 a		
Mentoring					
Independence		-.275	-1.76 ( $P < .9$ )		
Tough-Mindedness		-.494	-3.15 b		
				.1619	5.06 c

Adjusted  $R^2$  values are presented

(Continued Table 23)

*F* and non-adjusted *R*<sup>2</sup> values for the corresponding just identified model.

Criterion	<i>R</i> <sup>2</sup>	<i>F</i>
Subjective career success	.3719	2.11 <i>ns</i>
Objective career success	.3595	2.32 <i>c</i>
Provision of mentoring	.2797	1.94 <i>ns</i>
Networking	.3560	3.32 <i>c</i>
Mentoring	.3404	3.82 <i>b</i>

*a* *P* < .001    *b* *P* < .01    *c* *P* < .05

Table 24: Stepwise multiple regressions for the development of the path analytic model with the women respondents in grade 5 and above (figure 3.3) (only the variables which were included in the final equation are presented) ( $n = 61$ )

Variable	Criterion	$\beta$	$t$	$R^2$	$F$
Subjective career success					
Anxiety		-.284	-2.82 <sup>b</sup>		
Mentoring		.504	4.91 <sup>a</sup>		
Objective Career Success		.230	2.34 <sup>c</sup>		
Provision of mentoring		.048	.47 <sup>ns</sup>		
Objective career success					
Networking		.382	3.15 <sup>b</sup>		
Provision of mentoring					
Tough-Mindedness		-.201	-1.59 ( $P < .12$ )		
Mentoring		.226	1.79 ( $P < .08$ )		
Networking					
Mentoring		.443	3.79 <sup>a</sup>		
Mentoring					
Anxiety		-.232	-1.85 ( $P < .07$ )		
Tough-Mindedness		-.200	-1.60 ( $P < .12$ )		
Adjusted $R^2$ values are presented					
				.0603	2.93 ( $p < .07$ )
				.1823 <sup>b</sup>	14.37 <sup>a</sup>
				.0781	6.30 <sup>c</sup>
				.1313 <sup>c</sup>	9.92 <sup>b</sup>
				.4555 <sup>b</sup>	13.34 <sup>a</sup>

Adjusted  $R^2$  values are presented

(Continued Table 24)

*F* and non-adjusted *R*<sup>2</sup> values for the corresponding just identified model.

Criterion	<i>R</i> <sup>2</sup>	<i>F</i>
Subjective career success	.5170	5.95 a
Objective career success	.2254	1.86 ns
Provision of mentoring	.1866	1.74 ns
Networking	.3049	3.95 b
Mentoring	.1118	1.38 ns

a *P* < .001 b *P* < .01 c *P* < .05

To test for the goodness of fit of the causal path models the method which makes use of the  $\chi^2$  test was applied (Pedhazur, 1982; Specht, 1975). The degrees of freedom are equal to the number of the overidentifying restrictions (indicated with  $d$ ) which are imposed on the model. The number of overidentifying restrictions is defined as the number of paths in the corresponding just-identified model (where all variables are inter-connected with paths) minus the number of paths in the causal path model under consideration. The number of paths in the corresponding just-identified models can be simply estimated with the use of the following combinatorics formula (e.g., Howell, 1987):  $C_r^N = N! / r! (N - r)!$ , where  $N$  is the number of variables included in the model and  $r$  is the number of variables connected by a single path. In any causal path model  $r$  always equals 2. In the present case,  $N = 9$  in the models without provision of mentoring included in them (models 2.1 to 2.3); and  $N = 10$  in the models with provision of mentoring included in them (models 3.1 to 3.3). Using the above formula it is found that for the former models the number of paths in the corresponding just-identified models equals 36; and for the latter models the number of paths in the corresponding just-identified models equals 45.

To test for the goodness of fit of the models the following formula is used:

$$W = - (N - d) \ln Q \quad (1)$$

where  $N$  equals the sample size and  $d$  equals the number of overidentifying restrictions of the model under consideration.

$Q$  is estimated according to the following formula:

$$Q = 1 - R_m^2 / 1 - M \quad (2) \text{ where}$$

$$R_m^2 = 1 - \sum_1^k (1 - R_k^2) \quad (3)$$

where  $R_k^2$  is the multiple squared coefficient of the  $k$ th multiple regression equation as estimated for the corresponding just-identified model.

$$M = 1 - \sum_1^k (1 - R_k^2) \quad (4)$$

where  $R_k^2$  is the multiple squared coefficient of the  $k$ th multiple regression equation as estimated for the overidentified model under consideration.

It should be obvious that  $(1 - R_k^2) = e_k^2$  (5)

In the present work,  $k = 1, \dots, 4$  for the models without provision of mentoring included in them (models 2.1 to 2.3); and  $k = 1, \dots, 5$  for the models with provision of mentoring included in them (models 3.1 to 3.3).

The distribution of  $W$  approximates the  $\chi^2$  distribution with  $d$  degrees of freedom (e.g., Specht, 1975). The values of the  $\chi^2$  distribution are used to test for the significance of the causal model. Rejection of the null hypothesis, that is if the value of  $W$  indicates a significant  $\chi^2$ , leads

to the conclusion that the model does not fit the data (Pedhazur, 1982; Specht, 1975). Therefore, non-significant values for  $W$  should be sought. The formulas that are described above indicate that to have causal models that fit the data the values of  $W$  should be as low as possible (ideally equal to zero). The closer the values of  $M$  are to the values of  $R_m^2$  (over-identified and just-identified models, respectively) the nearer is  $Q$  to 1 (it is reminded that  $\ln(1) = 0$ ); hence, the more likely is the model to fit the data.

The size of the sample can be a decisive factor when testing the significance of the causal model, because the significance of the  $\chi^2$  test is affected by the sample size. For this reason, some authors recommend use of the  $Q$  values instead of the significance of the  $\chi^2$  as an index of goodness of fit (e.g., Joreskog, 1974). However, in the present work a technique which can increase confidence in the goodness of fit as indicated by the significance of the  $\chi^2$  is proposed and used. This technique is derived with the simple consideration which follows.

The greater the amount of variance accounted for by the multiple regression equations in the just-identified model [that is the greater the value of the  $R_k^2$ 's in equation (3)] the smaller  $\sum_1^k (1 - R_k^2)$  in equation (3) becomes; and the greater  $R_m^2$  becomes. The greater the values for  $R_m^2$  the smaller the values for the numerator in equation (2); hence, the smaller the value of  $Q$ . From equation (1), the nearer to zero the values of  $Q$  the greater the values of  $W$ ; therefore, the higher the likelihood that the null hypothesis will be rejected (indicating that the causal model does not fit the data), regardless of the values of  $M$ . This suggests that for relatively small sample sizes use of the non-adjusted  $R^2$  values in the estimation of  $R_m^2$  increases the likelihood that the model will be proved not to fit the data. Therefore, use of the non-adjusted  $R^2$  values in the estimation of  $R_m^2$  increases confidence over a model which is found to fit the data. For this reason the non-adjusted values of the  $R^2$  were used for the estimation of the  $R_m^2$ . This was followed in the procedures for testing for the goodness of fit of all models with the exception of the model which included all the respondents ( $n = 272$ ).

The testing for the goodness of fit of the causal models follows.

For model 2.1, using the equations (3) and (5) we have  $R_m^2 = 1 - [(e_{Men})^2 + (e_{Net})^2 + (e_{OCS})^2 + (e_{SCS})^2]$ , where  $e_{Men}^2$ ,  $e_{Net}^2$ ,  $e_{OCS}^2$  and  $e_{SCS}^2$  refer to the just-identified model. By substituting the values for  $e_{Men}^2$ ,  $e_{Net}^2$ ,  $e_{OCS}^2$  and  $e_{SCS}^2$  we obtain  $R_m^2 = .1813$ . Using equations (4) and (5) we have  $M = 1 - [(e_{Men})^2 + (e_{Net})^2 + (e_{OCS})^2 + (e_{SCS})^2]$ , where  $e_{Men}^2$ ,  $e_{Net}^2$ ,  $e_{OCS}^2$  and  $e_{SCS}^2$  refer to the over-identified model. Substituting the arithmetic values we obtain  $M = .1781$ . There are 9 paths included in the model, therefore  $d = 36 - 9 = 27$ . Substituting the values of  $R_m^2$  and  $M$  in formula (2) we obtain  $Q = .9961$ ; and from formula (1):  $W = - (272 - 27) \ln(.9961) =$

.957. Using the significance levels for  $\chi^2$  ( $df = d = 29$ ) the null hypothesis cannot be rejected. Therefore, it is concluded that the model fits the data.

Similarly, for model 2.2 (male respondents regardless of grade):  $R_m^2 = .3178$ ,  $M = .2399$ ,  $Q = .8975$ ; and finally:  $W = 4.898$ , with  $df = 27$  ( $d = 36-9$ ). The null hypothesis cannot be rejected. Therefore it is concluded that the model fits the data.

For model 2.3 (female respondents regardless of grade):  $R_m^2 = .1801$ ,  $M = .1571$ ,  $Q = .9727$ ; and finally:  $W = 4.733$ , with  $df = 28$  ( $d = 36-8$ ). The null hypothesis cannot be rejected. Therefore, it is concluded that the model fits the data.

The same procedure was followed for the models in which provision of mentoring was included (models 3.1 to 3.3). In this case  $R_m^2 = 1 - [(e_{Men})^2 + (e_{Net})^2 + (e_{Prov.Men})^2 + (e_{OCS})^2 + (e_{SCS})^2]$ , where  $e_{Men}$ ,  $e_{Net}$ ,  $e_{Prov.Men}$ ,  $e_{OCS}$  and  $e_{SCS}$  correspond to the just-identified models; and  $M = 1 - [(e_{Men})^2 + (e_{Net})^2 + (e_{Prov.Men})^2 + (e_{OCS})^2 + (e_{SCS})^2]$ , where  $e_{Men}$ ,  $e_{Net}$ ,  $e_{Prov.Men}$ ,  $e_{OCS}$  and  $e_{SCS}$  correspond to the over-identified models.

For model 3.1 (all respondents in grade 5 and above):  $R_m^2 = .3291$  and  $M = .2501$ . There are 11 paths included in the model, therefore  $d = 45 - 11 = 34$ . Substituting the values of  $R_m^2$  and  $M$  in formula (2) we obtain  $Q = .8947$ ; and from formula (1):  $W = - (104 - 34) \ln(.8947) = 7.789$ . Using the significance levels for  $\chi^2$  ( $df = d = 34$ ) the null hypothesis cannot be rejected. Therefore, it is concluded that the model fits the data.

Similarly, for model 3.2 (male respondents in grade 5 and above) and following the above procedure:  $R_m^2 = .4662$ ,  $M = .2717$ ,  $Q = .7329$ ; and finally:  $W = 2.175$ , with  $df = 36$  ( $d = 45-9$ ). The null hypothesis cannot be rejected. Therefore, it is concluded that the model fits the data.

For the model in Figure 3.3 (female respondents in grade 5 and above):  $R_m^2 = .3988$ ,  $M = .2546$ ,  $Q = .8065$ ; and finally:  $W = 5.591$ , with  $df = 35$  ( $d = 45-10$ ). The null hypothesis cannot be rejected. Therefore, it is concluded that the model fits the data.

It is reminded that in the goodness of fit calculations for all models, except model 2.1, the non-adjusted  $R^2$  values were used for the estimation of  $R_m^2$ . As shown, use of the non-adjusted  $R^2$  in the estimation of  $R_m^2$  values increases confidence in the goodness of fit of the models.

### 7.5.3 EFFECT COEFFICIENTS

The effect of a variable on another variable in the causal path model is referred to as the total effect. Because of the indirect effects, the size of the total effect may be substantially



different from the size of the direct effect (e.g., Asher, 1983). The estimation of the total effect is made by means of the estimation of the effect coefficient which is the sum of the direct and the indirect effects of the causal variable on the effect variable (e.g., Asher, 1983; Pedhazur, 1982). The effect coefficients of a causal variable on an effect variable can be estimated only if the latter variable is an endogenous variable. Although outside the scope of the present work, it is noted that the indirect effect must not be considered as equal in magnitude to the regression coefficient minus the direct effect (direct path coefficient) (e.g., Asher, 1983). Spurious effects (e.g., due to common causal variables) and unanalysed effects (e.g., attributed to relationships between exogenous variables), which are not considered as part of the indirect effects, also contribute to the magnitude of the correlation coefficient (e.g., Asher, 1983; Pedhazur, 1982).

The effect coefficients (E) (total effects) were calculated as the algebraic sum of the direct effect (DE) and the indirect effects (IE), that is  $E = DE + IE$  (e.g., Bryman & Cramer, 1990; MacDonald, 1977; Pedhazur, 1982). The direct effect of a variable on another variable is equivalent to the path coefficient that corresponds to the direct path between the two variables. The indirect effects are estimated by summing the products of the path coefficients of all the indirect paths between the two variables of interest. Effect coefficients can be safely compared with each other only if they refer to the same endogenous variable (e.g., Pedhazur, 1982).

Finally, there is the possibility the effect coefficients (in essence, the standardised regression coefficients) in some models to be inflated due to the relatively small number of cases. This can be especially the case in the models that were developed on the basis of responses from men and women in grade 5 and above (sample sizes equal to 43 and 61, respectively). This possibility is taken into account when comments regarding the effect sizes are made and when the results are discussed. The estimation of the effect coefficients is presented below.

#### *Respondents regardless of grade*

##### *All Respondents*

For model 2.1 (all respondents) the effect coefficients of the variables which have effects on subjective career success were calculated as following (regarding the subscripts, the variable denoted second is the variable which exerts the effect and the variable denoted first is the variable on which the effect is exerted):

$$E_{SCS.OCS} = p_{87} = .166$$

$$E_{SCS. Networking} = p_{76}p_{87} = (.288)(E_{SCS.OCS}) = .048$$

$$E_{SCS.Mentoring} = p_{65}p_{76}p_{87} + p_{85} = (.401) (E_{SCS. Networking}) + (.534) = .553$$

$$E_{SCS.Anxiety} = p_{84} = -.201$$

$$E_{SCS.Tough-Mindedness} = p_{73} (E_{SCS.OCS}) + p_{53} (E_{SCS.Mentoring}) = (.157) (.166) + (-.161) (.553) = -.063$$

$$E_{SCS.Extraversion} = p_{62} (E_{SCS. Networking}) = (.160) (.048) = .008$$

$$E_{SCS.Independence} = p_{81} = -.126$$

The corresponding effect coefficients for the variables which have effects on objective career success were:

$$E_{OCS.Networking} = p_{76} = .288$$

$$E_{OCS.Mentoring} = p_{65}p_{76} = .401 (E_{OCS.Networking}) = .115$$

$$E_{OCS.Tough-Mindedness} = p_{73} + p_{53} (E_{OCS.Mentoring}) = .157 + (-.161) (.115) = .138$$

$$E_{OCS.Extraversion} = p_{62} (E_{OCS.Networking}) = (.160) (.288) = .046$$

For the variables which exert effects on networking the corresponding effect coefficients were:

$$E_{Networking.Mentoring} = p_{65} = .401$$

$$E_{Networking.Tough-Mindedness} = p_{53} (E_{Networking.Mentoring}) = (-.161) (.401) = -.065$$

$$E_{Networking.Extraversion} = p_{62} = .160$$

For the variables which exert effects on mentoring the corresponding effect coefficients were:

$$E_{Mentoring.Tough-Mindedness} = p_{53} = -.161$$

As it can be seen, by far the strongest effects on subjective career success are exerted by mentoring. The effect of objective career success cannot be considered weak, however, it is less than one third in size than that of mentoring. The effect of networking is negligible. Independence and, especially, Anxiety are the personality factors that exert negative effects of considerable strength. The effect of Tough-Mindedness is extremely weak.

The strongest effects on objective career success are exerted by networking. The effect of mentoring is not negligible, however, is much weaker than of networking. Tough-Mindedness, among the personality factors, exerts an effect of weak to medium strength on objective career success. This effect is slightly stronger than the effect of mentoring. The effect of Extraversion is very weak.

The strongest effect on networking is exerted by mentoring. The effect of Extraversion is of considerable strength, but it is much weaker than the effect of mentoring. The effect of Tough-Mindedness is negative and very weak.

The only personality factor that exerts effects on mentoring is Tough-Mindedness. The effect is negative and its size is of medium strength.

*By Gender*

For model 2.2 (all men respondents) the effect coefficients were the following:

Effects on subjective career success:

$$E_{SCS.OCS} = p_{87} = .179$$

$$E_{SCS.Networking} = p_{76}p_{87} = (.360) (E_{SCS.OCS}) = .064$$

$$E_{SCS.Mentoring} = p_{65}p_{76}p_{87} + p_{85} = (.453) (E_{SCS.Networking}) + (.587) = .616$$

$$E_{SCS.Anxiety} = p_{84} = -.185$$

$$E_{SCS.Tough-Mindedness} = p_{73} (E_{SCS.OCS}) + p_{53} (E_{SCS.Mentoring}) = (.300) (.179) + (-.437) (.587) = -.203$$

$$E_{SCS.Extraversion} = p_{62} (E_{SCS.Networking}) = (.135) (.064) = .009$$

$$E_{SCS.Independence} = p_{51}(E_{SCS.Mentoring}) = (-.362) (.616) = -.223$$

Effects on objective career success:

$$E_{OCS.Networking} = p_{76} = .360$$

$$E_{OCS.Mentoring} = p_{65}p_{76} = (.453) (E_{OCS.Networking}) = .163$$

$$E_{OCS.Tough-Mindedness} = p_{73} + p_{53} (E_{OCS.Mentoring}) = .300 + (-.437) (.163) = .229$$

$$E_{OCS.Extraversion} = p_{62} (E_{OCS.Networking}) = (.135) (.360) = .049$$

Effects on networking:

$$E_{Networking.Mentoring} = p_{65} = .453$$

$$E_{Networking.Tough-Mindedness} = p_{53} (E_{Networking.Mentoring}) = (-.437) (.453) = -.198$$

$$E_{Networking.Extraversion} = p_{62} = .135$$

$$E_{Networking.Independence} = p_{51} (E_{Networking.Mentoring}) = (-.362) (.453) = -.163$$

Effects on mentoring:

$$E_{Mentoring.Tough-Mindedness} = p_{53} = -.437$$

$$E_{Mentoring.Independence} = p_{51} = -.362$$

Regarding the effects on subjective career success, as it can be seen, the effects size pattern is very similar to the pattern for the general model, the only difference being in the effect size of Tough-Mindedness. As in the case for the general model, a very strong effect on subjective career success is exerted by mentoring. The effect of objective career success is of

rather medium size, however, it is nearly four times weaker than the effect of mentoring. The effect of networking is very weak. As in the general model, Anxiety and Independence exert negative effects of medium strength on subjective career success. The difference with the general model is that in men's model Tough-Mindedness exerts a negative effect of considerable strength.

Regarding the effects on objective career success, the pattern is very similar to that for the general model. Networking exerts the strongest effects. The effect of mentoring is about half the size of the effect of networking. The effect of Tough-Mindedness is of considerable size and it is the second strongest; and the effect of Extraversion is very weak.

Concerning the effects on networking, the strongest effects are exerted by mentoring. The effect of Extraversion is of weak to medium strength. The discrepancy with the general model is that in men's model, Tough-Mindedness exerts a negative effect of considerable strength, the second strongest after the effect of mentoring. Furthermore, an effect of near medium strength is identified for Independence.

Tough-Mindedness exerts a rather strong negative effect on mentoring. Furthermore, Independence exerted a negative effect of considerable strength.

For model 2.3 (all women respondents) the effect coefficients are the following:

Effects on subjective career success:

$$E_{SCS.OCS} = p_{87} = .207$$

$$E_{SCS.Networking} = p_{76}p_{87} = (.280)(E_{SCS.OCS}) = .058$$

$$E_{SCS.Mentoring} = p_{65}p_{76}p_{87} + p_{85} = (.365)(E_{SCS.Networking}) + (.490) = .511$$

$$E_{SCS.Anxiety} = p_{84} = -.226$$

$$E_{SCS.Tough-Mindedness} = p_{53}(E_{SCS.Mentoring}) = (-.087)(.511) = -.044$$

$$E_{SCS.Independence} = p_{81} + p_{61}(E_{SCS.Networking}) = (-.129) + (.198)(.058) = -.118$$

Effects on objective career success:

$$E_{OCS.Networking} = p_{76} = .280$$

$$E_{OCS.Mentoring} = p_{65}p_{76} = (.365)(E_{OCS.Networking}) = .102$$

$$E_{OCS.Tough-Mindedness} = p_{53}(E_{OCS.Mentoring}) = (-.087)(.102) = -.009$$

$$E_{SCS.Independence} = p_{61}(E_{SCS.Networking}) = (.198)(.280) = .055$$

Effects on networking:

$$E_{Networking.Mentoring} = p_{65} = .365$$

$$E_{\text{Networking.Tough-Mindedness}} = p_{53} (E_{\text{Networking.Mentoring}}) = (-.087) (.365) = -.032$$

$$E_{\text{Networking.Independence}} = p_{61} = .198$$

Effects on mentoring:

$$E_{\text{Mentoring.Tough-Mindedness}} = p_{53} = -.087$$

Regarding subjective career success, the pattern of effect sizes are similar to that of the general model. The strongest effects are exerted by mentoring. The effect of objective career success is of medium strength. The effect of networking is very weak. Among the personality traits, Anxiety exerts a negative effect of considerable strength and the effect size of Independence is not negligible. The effect of Tough-Mindedness is very weak.

Regarding objective career success, the difference with the general and men's model is the lack of effect by Tough-Mindedness. Furthermore, Extraversion does not exert even the weakest of effects as it was not included in the model; and Independence, which did not appear in this part of any of the other models, appeared in this model exerting a very weak effect on objective career success. Otherwise, networking exerts an effect of medium to strong size. The effect of mentoring is rather weak.

Regarding networking, a major discrepancy with the general and men's model is identified in women's model. The discrepancy is that Extraversion is not included in the model. The effect of mentoring is strong. Among the personality factors, Independence exerts a positive, and rather unexpected, effect of considerable strength. In line with the general model, but in contrast to the men's model, the effect of Tough-Mindedness is negligible.

Regarding mentoring, Tough-Mindedness exerts a weak negative effect. This is in contrast to the general model and, especially, to the model for men, where Tough-Mindedness exerted effects of considerable strength.

#### *Respondents in grade 5 and above*

For the models which include provision of mentoring (Figures 3.1 to 3.3) the procedure was similar.

#### *All Respondents*

For model 3.1 (all respondents in grade 5 and above) the effect coefficients are the following:

Effects on subjective career success:

$$E_{SCS.OCS} = p_{98} = .166$$

$$E_{SCS.ProvMentoring} = p_{97} + p_{87}p_{98} = (.061) + (.116)(E_{SCS.OCS}) = .080$$

$$E_{SCS.Networking} = p_{86}p_{98} = (.354)(E_{SCS.OCS}) = .059$$

$$E_{SCS.Mentoring} = p_{95} + p_{75}(E_{SCS.ProvMentoring}) + p_{65}(E_{SCS.Networking}) = (.557) + (.350)(.080) + (.484)(.059) = .614$$

$$E_{SCS.Anxiety} = p_{94} = -.150$$

$$E_{SCS.Tough-Mindedness} = p_{53}(E_{SCS.Mentoring}) + p_{83}(E_{SCS.OCS}) + p_{73}(E_{SCS.ProvMentoring}) = (-.304)(.614) + (.240)(.166) + (-.127)(.080) = -.157$$

$$E_{SCS.Extraversion} = p_{62}(E_{SCS.Networking}) = (.132)(.059) = .008$$

Effects on objective career success:

$$E_{OCS.ProvMentoring} = p_{87} = .116$$

$$E_{OCS.Networking} = p_{86} = .354$$

$$E_{OCS.Mentoring} = p_{75}(E_{OCS.ProvMentoring}) + p_{65}(E_{OCS.Networking}) = (.350)(.116) + (.484)(.354) = .212$$

$$E_{OCS.Tough-Mindedness} = p_{83} + p_{53}(E_{OCS.Mentoring}) + p_{73}(E_{OCS.ProvMentoring}) = (.240) + (-.304)(.212) + (-.127)(.116) = .161$$

$$E_{OCS.Extraversion} = p_{62}(E_{OCS.Networking}) = (.132)(.354) = .047$$

Effects on provision of mentoring:

$$E_{ProvMentoring.Networking} = 0 \text{ (no path)}$$

$$E_{ProvMentoring.Mentoring} = p_{75} = .350$$

$$E_{ProvMentoring.Tough-Mindedness} = p_{73} + p_{53}(E_{ProvMentoring.Mentoring}) = (-.127) + (-.304)(.350) = -.233$$

Effects on networking:

$$E_{Networking.Mentoring} = p_{65} = .484$$

$$E_{Networking.Tough-Mindedness} = p_{53}(E_{Networking.Mentoring}) = (-.304)(.484) = -.147$$

$$E_{Networking.Extraversion} = p_{62} = .132$$

Effects on mentoring:

$$E_{Mentoring.Tough-Mindedness} = p_{53} = -.304$$

Regarding subjective career success, the effect sizes do not show considerable discrepancies to those in the model where all respondents regardless of grade were included. Mentoring exerts a very strong effect. The effect of objective career success is of near medium strength. The effect of networking is very weak. Anxiety exerts a negative effect of near medium strength. Again, the effect of Extraversion is negligible. The discrepancy is that Tough-Mindedness exerts a negative effect of near medium size (its effect in the general model was very weak). The effect of provision of mentoring, the additional variable, is weak.

Regarding objective career success the pattern of effect sizes is similar to those in the model where all respondents were included (Figure 2.1). Networking exerts the strongest effect. The effect of mentoring is of medium size, somewhat stronger than the effect of Tough-Mindedness, which is positive. The effect of Extraversion is very weak. Finally, the effect of provision of mentoring is not negligible, but not of considerable strength either.

Regarding the effect sizes on the additional variable, provision of mentoring. A rather strong effect is exerted by mentoring. Networking does not exert any effect, as no path was identified. Tough-Mindedness exerts a negative effect of medium size.

Regarding networking, mentoring exerts a strong effect. The effect of Extraversion is of weak to medium size. Similarly, Tough-Mindedness exerts a negative effect of weak to medium size on networking.

Regarding mentoring, Tough-Mindedness exerts an effect of medium to high strength.

### *By Gender*

For model 3.2 (men respondents in grade 5 and above) the effect coefficients are the following:

Effects on subjective career success:

$$E_{SCS.OCS} = p_{98} = .204$$

$$E_{SCS.ProvMentoring} = p_{87}p_{98} = (.274) (E_{SCS.OCS}) = .056$$

$$E_{SCS. Networking} = p_{86}p_{98} = (.305) (E_{SCS.OCS}) = .062$$

$$E_{SCS.Mentoring} = p_{95} + p_{75} (E_{SCS.ProvMentoring}) + p_{65} (E_{SCS. Networking}) = (.546) + (.404) (.056) + (.556) (.062) = .607.$$

$$E_{SCS.Anxiety} = p_{94} = -.173$$

$$E_{SCS.Tough-Mindedness} = p_{53} (E_{SCS.Mentoring}) + p_{83} (E_{SCS.OCS}) = (-.494) (.607) + (.395) (.204) = -.219$$

Effects on objective career success:

$$E_{\text{OCS.ProvMentoring}} = p_{87} = .274$$

$$E_{\text{OCS. Networking}} = p_{86} = .305$$

$$E_{\text{OCS.Mentoring}} = p_{75} (E_{\text{OCS.ProvMentoring}}) + p_{65} (E_{\text{OCS. Networking}}) = (.404) (.274) + (.556) (.305) = .281$$

$$E_{\text{OCS.Tough-Mindedness}} = p_{83} + p_{53} (E_{\text{OCS.Mentoring}}) = (.395) + (-.494) (.281) = .256$$

Effects on provision of mentoring:

$$E_{\text{ProvMentoring. Networking}} = 0 \text{ (no path)}$$

$$E_{\text{ProvMentoring.Mentoring}} = p_{75} = .404$$

$$E_{\text{ProvMentoring.Tough-Mindedness}} = p_{53} (E_{\text{ProvMentoring.Mentoring}}) = (-.494) (.404) = -.200$$

$$E_{\text{ProvMentoring.Independence}} = p_{51} (E_{\text{ProvMentoring.Mentoring}}) = (-.275) (.404) = -.111$$

Effects on networking:

$$E_{\text{Networking.Mentoring}} = p_{65} = .556$$

$$E_{\text{Networking.Tough-Mindedness}} = p_{53} (E_{\text{Networking.Mentoring}}) = (-.494) (.556) = -.275$$

Effects on mentoring:

$$E_{\text{Mentoring.Tough-Mindedness}} = p_{53} = -.494$$

Regarding subjective career success, the pattern of effect sizes is very similar to the pattern identified for the general model where respondents in grade 5 and above are considered (Figure 3.1). Mentoring exerts a very strong effect on subjective career success. The effect of objective career success is of rather medium size; it is about three times weaker than the effect of mentoring. The effect of networking is very weak. Anxiety and Tough-Mindedness exert negative effects of medium size. Finally, the effect of provision of mentoring is extremely weak, to be described as negligible.

Regarding objective career success, the discrepant point in relation to all models presented so far, is that the effect sizes of mentoring and networking are comparable. Tough-Mindedness exerts an effect of medium size. Finally, the effect of provision of mentoring is quite strong. It is of similar size to the effects of networking and mentoring.

Regarding provision of mentoring, the effect size of mentoring is strong. No effect is exerted by networking as no path was identified. The effect of Tough-Mindedness is of weak to medium strength and the negative effect of Independence is weak.



Regarding networking, the effect of mentoring is strong, being consistent with the rest of the models. The effect of Tough-Mindedness is negative and of medium strength. In contrast with the general model, and most of the models presented so far, Extraversion does not exert any effect, as it was not included in the model.

Regarding mentoring, Tough-Mindedness exerts a strong negative effect, as it does in the general model.

For model 3.3 (women respondents in grade 5 and above) the effect coefficients are the following:

Effects on subjective career success:

$$E_{SCS.OCS} = p_{98} = .230$$

$$E_{SCS.ProvMentoring} = p_{97} = .048$$

$$E_{SCS.Networking} = p_{86}p_{98} = (.382) (E_{SCS.OCS}) = .088$$

$$E_{SCS.Mentoring} = p_{95} + p_{75} (E_{SCS.ProvMentoring}) + p_{65} (E_{SCS.Networking}) = (.504) + (.226) (.048) + (.352) (.088) = .546$$

$$E_{SCS.Anxiety} = p_{94} + p_{54} (E_{SCS.Mentoring}) = (-.284) + (-.232) (.546) = -.411$$

$$E_{SCS.Tough-Mindedness} = p_{53} (E_{SCS.Mentoring}) + p_{73} (E_{SCS.ProvMentoring}) = (-.200) (.546) + (-.201) (.048) = -.119$$

$$E_{SCS.Independence} = p_{61}(E_{SCS.Networking}) = (.239) (.088) = .021$$

Effects on objective career success:

$$E_{OCS.ProvMentoring} = p_{87} = 0$$

$$E_{OCS.Networking} = p_{86} = .382$$

$$E_{OCS.Mentoring} = p_{65} (E_{OCS.Networking}) = (.352) (.382) = .134$$

$$E_{SCS.Anxiety} = p_{54} (E_{OCS.Mentoring}) = (-.232) (.134) = -.031$$

$$E_{OCS.Tough-Mindedness} = p_{53} (E_{OCS.Mentoring}) = (-.200) (.134) = -.027$$

$$E_{OCS.Independence} = p_{61}(E_{OCS.Networking}) = (.239) (.382) = .091$$

Effects on provision of mentoring:

$$E_{ProvMentoring.Networking} = 0$$

$$E_{ProvMentoring.Mentoring} = p_{75} = .226$$

$$E_{ProvMentoring.Anxiety} = p_{54} (E_{ProvMentoring.Mentoring}) = (-.232) (.226) = -.052$$

$$E_{ProvMentoring.Tough-Mindedness} = p_{73} + p_{53} (E_{ProvMentoring.Mentoring}) = (-.201) + (-.200) (.226) = -.246$$

Effects on networking:

$$E_{\text{Networking.Mentoring}} = p_{65} = .352$$

$$E_{\text{Networking.Tough-Mindedness}} = p_{53} (E_{\text{Networking.Mentoring}}) = (-.200) (.352) = -.070$$

$$E_{\text{Networking.Anxiety}} = p_{54} (E_{\text{Networking.Mentoring}}) = (-.232) (.352) = -.082$$

$$E_{\text{Networking.Independence}} = p_{61} = .239$$

Effects on mentoring:

$$E_{\text{Mentoring.Anxiety}} = p_{54} = -.232$$

$$E_{\text{Mentoring.Tough-Mindedness}} = p_{53} = -.200$$

Regarding subjective career success, the pattern of the effect sizes is similar to that in the general “senior” model, with the exception of the effect sizes identified for the personality traits. The effect of mentoring is strong. The effect of objective career success is of medium strength. The effect of networking is weak, as it was in the general model. In a discrepant manner to the general model, however, the effect of Anxiety is strong, somewhat weaker than the effect of mentoring and much stronger than the effect of objective career success. Furthermore, the negative effect of Tough-Mindedness shows tendencies towards weakness. The effect of Independence is negligible. Finally, the effect of provision of mentoring is very weak for any consideration in practical terms.

Discrepancies with regard to the general “senior” model (Figure 3.1) are found when the effect sizes on objective career success are considered. Networking exerts a strong effect. The effect of mentoring is of weak to medium strength. However, the relative effect of mentoring as compared to that of networking is weaker than it is in the mixed-gender model. In contrast to the mixed-gender model, Tough-Mindedness does not exert an effect worth of consideration in practical terms. The effect of Anxiety is negligible and the effect of Independence is weak. It is reminded that neither Anxiety nor Independence were included in the general model. Finally, in contrast to the general model, provision of mentoring exerts no effect as no path was included in the model.

Regarding provision of mentoring, the effect size pattern is similar to the pattern in the general model (Figure 3.1). Mentoring exerts an effect of medium strength. Networking exerts no effect, as it was not included in the model. Tough-Mindedness exerts a negative effect of medium size. The effect of Anxiety is very weak.

Regarding networking, mentoring exerts a strong effect. The positive effect of Independence is of medium strength. The effects of Anxiety and Tough-Mindedness are weak.

Regarding mentoring, Anxiety and Tough-Mindedness exert negative effects of medium strength.

#### *7.5.4 CONSIDERATION OF THE CAUSAL PATH ANALYSIS RESULTS AGAINST EXPECTATIONS*

After having established that all models are significant and having identified the effect coefficients for the variables included in them, reference to the expectations that were formulated in the previous chapter is made to estimate the extent to which they have been confirmed.

Expectation (1) was confirmed. A positive path from objective career success towards subjective career success was identified in all models. The path is of medium strength.

Expectation (2) was also confirmed. Very strong positive paths from mentoring towards networking were identified in all causal path models.

Expectation (3) was confirmed. Positive paths from networking towards objective career success were identified in all models. The strength of the paths can be considered to be medium to high. No direct paths from networking towards subjective career success were identified. This can be attributed, however, to the way that the causal paths were developed, that is by using stepwise regression. As networking was included along with mentoring in the prediction of subjective career success, mentoring may have forced networking out of the final model. Nevertheless, an indirect causal path from networking to subjective career success exists. Therefore, networking does exert effects on subjective career success, through its effects on objective career success.

Expectation (4) was also confirmed. Very strong positive causal paths from mentoring towards subjective career success were identified in all models. No direct causal paths from mentoring towards objective career success were identified. However, positive indirect causal paths from mentoring towards objective career success were identified. Therefore, mentoring exerts positive effects on objective career success through its effects on networking.

Expectation (5a) was only partly confirmed. Direct positive causal paths of weak to medium strength from provision of mentoring towards objective career success were identified for the general model (Figure 3.1) and the model which included the male respondents (Figure 3.2). However, no direct paths from provision of mentoring towards subjective career success were identified. Furthermore, the indirect effects of provision of mentoring towards subjective

career success were very weak, practically negligible. The failure to identify effects of provision of mentoring on subjective career success can be partly attributed to the stepwise regression technique on which the development of causal path modelling was based. Provision of mentoring may have been forced out of the final equation for the prediction of subjective career success by mentoring, which was proved to be a very strong predictor of subjective career success.

Expectation (5b) was mainly confirmed. Positive strong causal paths from mentoring towards provision of mentoring were identified in all models. No paths from networking to provision of mentoring were identified. However, this expectation was weak. Furthermore, failure to identify a path from networking towards provision of mentoring can be due to the fact that in the stepwise regression procedure for the prediction of provision of mentoring, networking was forced out of the final equation by mentoring which, as expected, was proved to be a strong predictor of provision of mentoring.

Expectation (6) was partly confirmed. Positive causal paths from Extraversion towards networking were identified in three out of the six models. The paths were of moderate strength. Furthermore, these paths were identified for both general models (i.e., in which respondents regardless of gender were included). The second, and weaker, part of the expectation was disconfirmed. No causal paths, direct or indirect, from Extraversion towards mentoring or provision of mentoring were identified.

Expectation (7) was confirmed. Direct negative paths from Anxiety towards subjective career success were identified in all models. The paths were of medium to high strength.

Expectations (8) were largely confirmed. Gender, however, seemed to moderate the pattern of relationships that were identified. Expectation (8a) was confirmed for the general models and for the models in which only male respondents were included. Direct positive causal paths from Tough-Mindedness towards objective career success were identified for these models. The paths were of moderate strength for the general models and of high strength for the models which included men respondents. However, no path was identified in the general women's model (Figure 2.3) and the path that was identified for women respondents in grade five and above was indirect, negative (contrary to the expectations) and very weak, to be considered negligible. Expectation (8b) was generally confirmed. Direct negative paths of moderate to high strength from Tough-Mindedness towards mentoring were identified. The exception appears to be the model which included all the women respondents regardless of grade (Figure 2.3), in which the path was weak. Finally, negative paths of weak to moderate strength from Tough-Mindedness towards provision of mentoring were identified.

Expectation (9) was confirmed only for the male respondents and the relationship appears to be moderated by gender. Direct negative paths of moderate to high strength from Independence towards mentoring were identified in the models in which men respondents were included. The paths from Independence towards networking were indirect, though mentoring, and of medium strength. Independence was not included in any of the general models, however. Furthermore, in the model which included all women respondents regardless of grade (Figure 2.3), a positive path of medium to high strength from Independence towards networking was identified. The direction of this path was contrary to the expectations and is discussed in the next chapter.

Expectations (10) were confirmed. No paths from Self-Control towards mentoring or networking were identified (expectation (10a) and no path from Self-Control towards objective career success was identified (expectation (10b)). Self-Control was not included in any of the causal path models.

In general, the causal path models that were identified conformed to the causal path models that were expected, as the great majority of the expected paths were confirmed in the path analysis in the expected direction. Large similarities in the causal paths emerged across genders. The expectation for moderating gender effects, however, were also clearly justified in two cases, namely in the effects of Tough-Mindedness and Independence on objective career success and mentoring/networking, respectively.

## 7.6 GENDER DIFFERENCES

Multiple regression analysis was employed to investigate gender differences (Analysis of Variance/Covariance and regression analysis conform to the same, general linear, model (e.g., Powell, 1987))

Before the investigation of the gender differences in the main variables of interest, gender differences in the personality traits were investigated. Women reported higher scores on Extraversion ( $t(270) = -3.96, P < .001$ ) and on Self-Control ( $t(270) = -2.46, P < .05$ ). The differences in Tough-Mindedness ( $t(270) = 1.67, P < .10$ ) and Independence ( $t(270) = 1.84, P < .10$ ) approached significance. For respondents in grade 5 and above, only the difference in Extraversion was significant ( $t(102) = -2.3, P < .05$ ) [means were 5.16 ( $SD = 1.84$ ) and 5.99 ( $SD = 1.78$ ) for men and women, respectively]. The difference in Tough-Mindedness approached significance ( $t(102) = 1.98, P < .06$ ) [means were 5.44 ( $SD = 1.96$ ) and 4.73 ( $SD = 1.68$ ) for men and women, respectively].

To investigate for gender differences in mentoring and networking, Multiple analysis of co-variance (MANCOVA) with tenure, work involvement and initial grade as co-variates was used. The results indicated that women reported more mentoring than men ( $F(1, 267) = 4.13, P < .05$ , adjusted means for men and women were 47.39 and 51.52, respectively); and more networking than men ( $F(1, 267) = 5.32, P < .05$ , adjusted means for men and women were 30.85 and 33.44, respectively<sup>11</sup>). A simple factorial analysis of co-variance, with the same co-variates, indicated that women reported more provision of mentoring than men ( $F(1, 99) = 7.19, P < .01$ , adjusted means for men and women were 17.51 and 20.67, respectively). A MANCOVA, with the same set of co-variates, indicated that women reported significantly more expressive networking than men ( $F(1, 267) = 18.77, P < .001$ , adjusted means for men and women were 13.13 and 15.37, respectively) and that there was no gender difference in instrumental networking ( $F(1, 267) = 0$ , adjusted means for men and women were 14.78 and 14.77, respectively). Finally, a MANCOVA with the same model specifications, but only with respondents in grade 5 and above included in the analysis, yielded results which follow the same pattern [ $F(1, 99) = 13.33, P < .001$  for expressive networking;  $F(1, 99) = .01, ns$  for instrumental networking].

To test whether the gender difference in mentoring and provision of mentoring can be attributed to gender differences in personality two hierarchical regressions were conducted. In the first regression, mentoring was regressed on gender, which was entered in the second block. Initial grade, tenure, work involvement, Independence and Tough-Mindedness were entered in the first block. The contribution of gender to scores on mentoring was not significant ( $\beta = -.08, t = -1.44, ns; F(6, 259) = 11.06, P < .001$ ). In the second regression, provision of mentoring was regressed on gender, which was entered in the second step. In the first step, initial grade, tenure, work involvement and Tough-Mindedness had been entered. The contribution of gender to scores on provision of mentoring was significant, but at .05 level ( $\beta = -.21, t = -2.35, P < .05; F(5, 98) = 8.46, P < .001$ ). The results of these regressions suggest that gender differences in personality (e.g., women being less Tough-Minded) partly account for the observed gender differences in mentoring and provision of mentoring.

To test whether the pattern of the gender differences in expressive and instrumental networking can be attributed to the gender difference in Extraversion two MANCOVAs, where expressive and instrumental networking were regressed on gender, were conducted. Extraversion was added to the other covariates, tenure, initial grade and work involvement. The gender difference in expressive networking was virtually unchanged ( $F(1, 266) = 16.65, P < .001$ , adjusted means for women and men were 15.34 and 13.21, respectively); and the gender

difference in instrumental networking remained insignificant ( $F(1, 266) = .34, ns$ ). However, the adjusted means in scores on instrumental networking were considerably shifted in such a way that men's adjusted mean became higher than women's adjusted mean (adjusted means for women and men for the models without Extraversion in them were 14.6 and 15, respectively). The latter result suggests that Extraversion accounts more for women's scores on instrumental networking than it accounts for men's scores.

To investigate for gender differences in objective and subjective career success three hierarchical regressions were conducted. The criterion variables were number of promotions, current grade and scores on subjective career success. The predictor variables were entered in two blocks. The first block included the control variables (age, education, social class, marital status, tenure, initial grade, work involvement) which were included in all regression equations where career success was the criterion variable, with the addition of mentoring and networking. An additional variable, parenthood (coded 0: not having children and 1: having children), was included. Parenthood may be differentially related to the career success of men and women (e.g., Melamed, 1995a). Furthermore, number of promotions was included in the control block in the regression in which scores on subjective career success were predicted. Gender (coded 1: female, 2: male) was entered alone in the second block. The regression models are presented in Tables 25 to 27.

The models suggest that gender made significant contributions to all models, above the contribution made by the control blocks. In particular, gender made a significant contribution in the models where number of promotions ( $\beta = .11, t = 2.06, P < .05$ ), current grade ( $\beta = .09, t = 2.33, P < .05$ ) and scores on subjective career success were the criteria ( $\beta = -.19, t = -3.37, P < .001$ ). The suggestion is that men are more likely to be promoted and that men are likely to reach higher organisational grades than women, even when a number of human capital, inter-personal and motivational factors are controlled for; in a structurally uniform environment. However, women reported being significantly more satisfied with their careers.

In the next step, gender differences in the five factors of the subjective career success scale as identified by Gattiker and Larwood (1986) were investigated. These factors are labelled: job success, inter-personal success, financial success, hierarchical success and life success (Gattiker & Larwood, 1986). Factor scores were estimated as the sums of the raw scores in individual items. Descriptive statistics and means' comparison statistics ( $t$ -tests) are presented in Table 28. Women's means were higher than men's means in all factors. The  $t$ -tests suggested significant gender differences in job success, interpersonal success, and financial success. The differences in life success and hierarchical success were not significant; though in the case of

Table 25: Hierarchical regression testing for the contribution of gender to the number of promotions (forcible entry for both blocks) ( $n = 272$ ).

Variable	$\beta$	$R^2$	$\Delta R^2$	$t$
Age	.0			0
Social class	-.11			-2.31 c
Education	.16			3.16 b
Marital status	.06			1.15
Parenthood	-.04			-.64
Initial Grade *	-.33			-5.96 a
Tenure	.45			7.27 a
Extraversion	-.01			-.24
Anxiety	-.05			-.94
Tough-Mindedness	.14			2.36 c
Independence	.10			1.95
Self-Control	-.07			-1.22
Work Involvement	.16			3.02 b
Mentoring	.06			1.02
Networking	.13			2.44 c
		.47		
Gender	.11			2.06 c
		.48	.01	

$F(16, 244) = 15.75$  a

Adjusted  $R^2$  values are presented a  $P < .001$  b  $P < .01$  c  $P < .05$

\* estimations are based on logarithmic values



Table 26: Hierarchical regression testing for the contribution of gender to current grade (forcible entry for both blocks) ( $n = 272$ ).

Variable	$\beta$	$R^2$	$\Delta R^2$	$t$
Age	-.04			-.71
Social class	-.08			-2.23
Education	.13			3.3 <sup>b</sup>
Marital status	.04			1.
Parenthood	-.01			-.31
Initial Grade	.74			17.74 <sup>a</sup>
Tenure	.36			8.01 <sup>a</sup>
Extraversion	-.01			-.21
Anxiety	-.04			-1.26
Tough-Mindedness	.10			2.28 <sup>c</sup>
Independence	.07			1.79
Self-Control	-.06			-1.53
Work Involvement	.12			3.1 <sup>b</sup>
Mentoring	.04			.94
Networking	.08			2.1 <sup>c</sup>
		.70		
Gender	.09			2.33 <sup>c</sup>
		.71	.01	

$F(16, 247) = 41.49$  <sup>a</sup>

Adjusted  $R^2$  values are presented    <sup>a</sup>  $P < .001$     <sup>b</sup>  $P < .01$     <sup>c</sup>  $P < .05$

Table 27: Hierarchical regression testing for the contribution of gender to scores on subjective career success (forcible entry for both blocks) ( $n = 272$ ).

Variable	$\beta$	$R^2$	$\Delta R^2$	$t$
Age	.06			.81
Social class	-.03			-.64
Education	-.04			-.65
Marital status	.06			.97
Parenthood	-.06			-.99
Initial Grade	.11			1.74
Tenure	-.13			-1.78
Extraversion	-.02			-.41
Anxiety	-.16			-3.11 b
Tough-Mindedness	.04			.63
Independence	-.11			-1.92
Self-Control	-.05			-.81
Work Involvement	.18			3.22 b
Mentoring	.42			7.25 a
Networking	.03			.51
Number of promotions	.26			3.95 a
		.40		
Gender	-.19			-3.37 a
		.43	.03	

$F(17, 243) = 12.33$  a

Adjusted  $R^2$  values are presented a  $P < .001$  a  $P < .01$  a  $P < .05$

Table 28: Descriptive statistics by gender in the five subjective career success factors as given by Gattiker and Larwood (1986).

Factor	Men ( <i>n</i> =73)		Women ( <i>n</i> = 199)		<i>t</i> -value
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Life success (e.g., “I enjoy my non work activities”)	15.99	2.44	16.44	2.49	-1.35
Job success (e.g., “I am dedicated to my work”)	24.53	6.13	26.23	5.69	-2.13 <sup>c</sup>
Interpersonal success (“I am respected by my colleagues”)	14.25	2.84	15.50	2.55	-3.47 <sup>a</sup>
Hierarchical success (e.g., “I am pleased with the promotions I have received so far”)	10.32	3.51	11.12	3.59	-1.65
Financial success (e.g., “I am earning as much as I think my work is worth”)	6.33	2.74	7.73	2.84	-3.64 <sup>a</sup>

<sup>a</sup> *P* < .001    <sup>c</sup> *P* < .05

hierarchical success the difference was significant at the .10 level. MANCOVA, with the “standard” co-variates, as they are presented in Table 27, moved all mean differences to significance ( $F(16, 254)$  equal to 12.23, 5.38, 4.14, 8.62, 4.86 for job success, inter-personal success, financial success, hierarchical success and life success, respectively,  $P < .001$  in all cases).

This investigation could show whether, and the extent to which, the highly significant gender difference in subjective career success can be attributed to women feeling much better than men regarding success in their lives and regarding inter-personal success in the work place. The answer, as suggested by the results of the  $t$ -tests, is negative. Salary in the organisations employed in the present work is linearly related to grade. Therefore, women report more satisfaction with their compensation and their hierarchical grade than men despite that they lag considerably behind, even when a large number of factors are taken into account.

Following the previous part of the investigation, the contribution of expressive and instrumental networking on subjective career success of men and women was investigated. This investigation could also provide some additional explanation for the gender difference in scores on subjective career success. The investigation was based on a multiple hierarchical regression by gender with scores on subjective career success as criterion. Expressive and instrumental networking were entered in the second block using the stepwise procedure. In the first block the “usual” variables were forcibly entered: age, education, social class, marital status, initial grade, tenure, work involvement, and the five personality traits. The results of the regressions are presented in Table 29. In the models of both genders only expressive networking was included in the final equation. However, its contribution to the men’s model ( $\beta = .31, t = 2.80, P < .01$ ) was considerably more significant than its contribution to the women’s model ( $\beta = .16, t = 2.29, P < .05$ ). Furthermore, conducting the same regressions, but including mentoring along with expressive and instrumental networking in the second block, yielded models with neither expressive nor instrumental networking in them, but in men’s model networking approached the significance level (.05) for inclusion in the equation ( $\beta = .19, t = 1.74, P < .10$ ).

The final step in the investigation was to identify the amount of variance in the gender differences in career success that was not accounted for by the control variables. Melamed (1995b) provided a method for the estimation of the percentage of variance in observed group differences in indices of career success which cannot be attributed to control factors (e.g., human capital). Melamed’s (1995b) procedure was followed in the present work with respect to number of promotions, current grade and subjective career success. Before progress is made it must be noted that Melamed (1995b) had used a greater and more detailed set of control factors, but not a

Table 29: Hierarchical regression for the relative contribution of expressive and instrumental networking on scores on subjective career success by gender.

Variable	Men ( <i>n</i> = 73)				Women ( <i>n</i> = 199)			
	$\beta$	$R^2$	$\Delta R^2$	<i>t</i>	$\beta$	$R^2$	$\Delta R^2$	<i>t</i>
Age	.10			.70	-.03			-.29
Education	.02			.14	.01			.16
Social class	-.17			-1.62	.04			.54
Marital status	.17			1.59	.05			.64
Initial Grade	-.13			-.97	.03			.43
Tenure	-.17			-1.18	.05			.61
Work Involvement	.53			4.91 <sup>a</sup>	.33			4.57 <sup>a</sup>
Extraversion	-.06			-.47	-.01			-.07
Anxiety	-.21			-1.93	-.14			-1.91
Tough-Mindedness	-.15			-1.22	.06			.7
Independence	-.18			-1.53	-.09			-1.14
Self-Control	-.09			-.70	-.06			-.69
Expressive Networking	.30	.30		2.80 <sup>b</sup>	.13	.13		2.29 <sup>c</sup>
Instrumental networking	.37	.37	.07		.15	.15	.02 <sup>c</sup>	
Instrumental networking	(.16)	(did not enter the equation)		1.32)	(.07)	(did not enter the equation)		.88)

 $F(13, 58) = 4.24^a$ Adjusted  $R^2$  values are presented <sup>a</sup>  $P < .001$  <sup>b</sup>  $P < .01$  <sup>c</sup>  $P < .05$  $F(13, 178) = 3.68^a$

structurally uniform environment. Therefore, although comparison of the present results with those of Melamed (1995b) will be made, the fact that they were derived on the basis of data yielded by different research designs should be kept in mind. To estimate the percentage of the gender difference in variance which could not be attributed to the control factors, Melamed (1995b) used the ratio of the gender difference in the adjusted means to the gender difference in the observed means. The adjusted means for number of promotions, current grade and subjective career success were 2.07, 5.37 and 72.79, respectively for men; and 1.65, 4.75 and 77.87, respectively for women. The co-variates in each case are the ones reported in Tables 25 to 27. Using Melamed's (1995b) formula

$$\frac{[(\text{difference in adj. means}) / (\text{difference in obs. means})] \times 100}{\text{percentage of variance not accounted for by the control factors}}$$

the outcome is that: 87.5% of the variance in the gender difference in the number of promotions; 44% of the variance in the gender difference in grade; and 89.4% of the variance in the gender difference in subjective career success were not accounted for by the control variables.

#### *7.6.1 CONSIDERATION OF THE RESULTS AGAINST EXPECTATIONS*

The results of the analyses on gender differences confirm the expectations. As expected, women reported more mentoring and more networking than men. Furthermore, according to the expectations, women reported more provision of mentoring than men did.

The expectation not to find women being higher in objective career success despite their higher scores on mentoring, networking and reception of mentoring, was also confirmed. It had been noted that to find a gender difference in objective career success in favour of men would be more realistic, and this was confirmed by the results. Finally, women were found to report higher scores on subjective career success than men, also confirming the corresponding expectation. Furthermore, the investigation suggested that very substantial percentages of the variance in the gender differences in career success cannot be accounted for by the control factors, including mentoring and networking. In fact, the percentages of variance unaccounted for approach all the variance in the gender differences when number of promotions and subjective career success are considered.

To summarise, in this chapter the analysis of the data was described along with justifications regarding the use of the statistical techniques that were employed. The relationship patterns between the variables and the gender differences were investigated. The results mostly confirmed the expectations. Personality and the inter-personal relationships variables were identified to work in causality order to exert their effects on objective, mainly, and subjective, secondarily, career success. Some indications for moderating gender effects in the relationship patterns were also found, although most of the causality relationships were common in both, male and female, causal path models. Statistical mediation of the relationship between personality and career success by the interpersonal relationships variables, however, was not identified. Regarding gender differences, the results suggest that the numerically non-male dominated organisational environment does not appear to have disturbed the consistent pattern of gender differences in career success that is found across the literature. However, the present organisational environment appeared to affect gender differences in the interpersonal relationship variables, as the pattern of the differences contradicts the majority of the findings reported in the literature, which referred to samples drawn from male-dominated organisational environments. Women were found to be behind men in objective career success terms, but they reported more satisfaction with their careers and more networking, mentoring and provision of mentoring. In the next chapter, the results are discussed taking into account the organisational context and the literature.

## CHAPTER 8: DISCUSSION



## CHAPTER 8. DISCUSSION

In the first section of this chapter consideration is given to the general pattern of the results, giving special attention to the human capital variables that were employed in the analysis for control purposes. Along with the line of the investigation, consideration is given to consistencies across general and gender-specific models. Although investigation of the relationships of these variables with career success was not the aim of this work this part of the discussion is necessary in order to illustrate the effects of these well-researched variables on career success, mentoring and networking in the present context and to identify similarities and differences with previous research. This can lead to insights regarding any peculiarities of the present context and suggestions for further research with these variables.

After that, the discussion of the findings with regard to the investigation that consisted the aim of the present work follows. Accounts for the identified causality patterns and the functionality of the models are formulated, taking into account the context and relevant literature. Consideration is given to the similarities and the differences that are identified between the models for the male and the female respondents and the implications of these similarities and differences. Similarly, the pattern of the gender differences is discussed with regard to previous research findings and the organisational environment in which the present investigation took place. In the consideration of both causality relationship patterns and gender differences, special emphasis is given to the promotion procedures that are in place in the organisational settings that the investigation took place. The limitations of the investigation and issues regarding its validity are discussed in a separate section. Finally, a number of suggestions and considerations regarding the implications of the results for organisational life and human resource practices are made and suggestions for further investigations are provided.

## 8.1 THE RELATIONSHIPS OF HUMAN CAPITAL FACTORS WITH THE INTER-PERSONAL VARIABLES AND CAREER SUCCESS

At a general level, the results suggest different antecedent variables for objective and subjective career success. This is in line with arguments in the literature (e.g., Gattiker & Larwood, 1988) and findings reported by other researchers (Aryee & Chao, 1994; Aryee, *et al.*, 1996).

The results suggest that human capital variables are predictive of objective career success, but not of subjective career success. Education, a general human capital variable, and tenure, an organisation-specific human capital variable, made significant contributions to the general model for objective career success. Class of social origin, a job-irrelevant human capital, also made a significant contribution to objective career success.

Considering the models by gender, the pattern was largely similar to that yielded for the mixed-gender model. However, class of social origin was yielded to be unrelated to objective career success in men's models.

A result that was contrary to what should be expected, however, was that the contribution of class of social origin to objective career success was found to be negative. This result is in contrast to other empirical reports (e.g., Dreher, *et al.*, 1985; Frieze, *et al.*, 1990). It cannot be attributed to the relationship between class of social origin and educational attainment. The relationship was positive, but not strong enough to justify the emergence of a significant negative contribution of class of social origin to objective career success.

The negative contribution of class of social origin to objective career success can be partly attributed to characteristics of the organisations employed in the present work. The majority of the individuals who are employed in clerical and administrative posts are hired locally, most of them coming from the low and middle socio-economic strata. 95.3% of the respondents indicated as their class of social origin "working", "working-middle" or "middle" class; three fourths (74.6%) of the respondents indicated "working" or "working-middle" class. None of the respondents indicated "upper class" as the class of her/his social origin. Coming from an upper socio-economic background may be an

advantage when managerial careers in large commercial organisations are considered or when occupational careers are considered. In the present case, however, a high class of social origin, meaning being in a “social-class minority”, may be a disadvantage.

The above account, however is not fully supported by all the patterns of relationships that were identified. In line with this account, class of social origin was negatively associated with subjective career success. Its association with mentoring and networking, however, was in the positive direction, a result that is not in line with the above account. Individuals who belong in a social minority should have more problems in establishing close relationships with superiors and establish a network of relationships in the organisation. Therefore, the above explanation, although intuitive and supported by part of the results, must be treated with caution. As a final point, the variance in the class of social origin is limited, the great majority of the respondents coming from the lower socio-economic backgrounds. The implication is that class of social origin may not be a factor that plays a major role in the organisational demographics in the present context. Because this result challenges the general idea that is held in the literature, however, it is suggested that further research may be needed.

Considering all respondents, work involvement was related to both objective and subjective career success. This pattern was also held across genders. This result is in line with previous empirical findings (e.g., Aryee, *et al.*, 1994; 1996; Whitely & Coetsier, 1993). Work involvement did not make significant contributions to objective career success when respondents in grade 5 and above were considered, however, though the contributions were in the positive direction and not negligible. An account for this result is that individuals who are at relatively high organisational levels are already involved in their work to a considerable degree. Hence, in middle and high organisational levels work involvement may not be as important for advancement. This explanation is partly supported by the significant difference in work involvement between respondents who were below grade 5 and respondents who were in grade 5 and above ( $t(270) = 3.45, P < .001$ ).

The relatively low levels of work involvement can be partly explained in terms of the consideration that nowadays the major pre-occupation of the employees is survival (Arthur, 1994; Hirsh, 1987); and that there may be a lack of belief in the workforce that

achievement and hard work will lead to organisational rewards (Arthur, 1994; Hirsh, 1987). Furthermore, comments that were made by some of the respondents at the end of the questionnaire, in space provided especially for this purpose ("any comments"), suggested that the nature of the jobs of some the respondents offers low levels of challenge, some of them perceiving few opportunities for advancement and personal development.

Marital status did not make a significant contribution to any of the models for career success, except from the positive contribution in men's model for subjective career success. Empirical results on the relationship between marital status and subjective career success are not unequivocal (e.g., Gattiker & Larwood, 1988; 1990; Schneer & Reitman, 1990). However, in the present context the pattern of the results can be explained in terms of family support. A supportive family can alleviate the subjective impact of negative career experiences and can enhance the impact of positive career experiences. Furthermore, the operationalisation of subjective career success in the present work is based on its conceptualisation as relating to both the work/career domain and the personal life domain (e.g., Gattiker, 1985; Gattiker & Larwood, 1986). Being married may be related to a general feeling of success in life; work and career being part of it. In addition, this general feeling of success in life should impact on work experiences.

Continuing with marital status, the point which appears to be interesting is that there is no differential relationship between marital status and career success by gender. The relationship between marital status and objective career success was positive, though nonsignificant, in the models for women respondents too. In fact, when women respondents regardless of grade were considered, the relationship approached significance ( $\beta = .11$ ,  $t = 1.70$ ,  $P < .10$ ). This pattern of results, albeit nonsignificant, is in contrast to the general pattern that follows from most reports in the literature (e.g., Shackett & Trapani, 1987). This result seems to be more in line with the finding by Schneer & Reitman (1993); that married women with children and a working husband were not in salary disadvantage in relation to women in any other family configuration. The suggestion being that social norms are being changed. Of course, there is the possibility that marital status and related factors (e.g., number of children) exerted their negative effects on women's careers before their entrance in the organisations that were

employed in the present investigation. The indices of career success that were used in this study tap career success only with respect to career progression in these particular organisations. A related point, however, is that, as seen, in higher hierarchical levels there was a tendency for women to be less likely than their male counterparts to be married (50.8% vs. 65.1%) and to have children (45.9% vs. 55.8%). The pattern was much more equitable when all respondents were considered (45.2% vs. 52.1% for being married and 41.7% vs. 43.8% for having children). This is in line with previous reports (e.g., Gutek, 1988; Tharenou, *et al.*, 1994). The obvious implication is that there is no shift in social norms, but women sacrifice marriage and having children to be successful in their careers. On the other hand, a ramification of this implication is that women with career aspirations choose to be involved in or to stay in a marriage only if the relationship (e.g., share in household responsibilities) is established on such basis as to be no burden or even to be instrumental in their careers. This suggestion can offer some additional help in explaining the finding regarding the direction of the relationship between marital status and objective career success for women and can form the basis of investigation.

No further consideration of the results regarding the relationship between marital status and career success will be given because it only refers to generally insignificant relationships regarding a variable that was not among the variables of interest in the present investigation. However, two notes regarding its implications will be made. The relationship patterns among variables and the gender differences that are “documented” in the literature may simply not hold in organisations where the traditional notion of male dominance is not present. Furthermore, the same “documented” patterns and gender differences may be changing as shifts are made in societal structures and institutions (e.g., gender roles in the family and the society).

In this section, the most important of the relationships that were identified for the variables that were used for control purposes in the statistical analysis were briefly discussed. The patterns that were found were mostly in line with previous investigations. Nevertheless, there were some discrepancies which may be related to the effects of the contextual factors and which suggest that further investigation is needed. In the following sections, the findings of the investigation on the relationship patterns among and the

gender differences in the variables which consisted the focus of the present work are discussed.

## 8.2 RELATIONSHIP PATTERNS

### 8.2.1 *THE RELATIONSHIP BETWEEN OBJECTIVE AND SUBJECTIVE CAREER SUCCESS*

According to expectations, objective and subjective career success were related. However, objective career success was not the strongest predictor for subjective career success. Mentoring was found to be a better predictor of subjective career success than objective career success was found to be. According to the causal models, objective career success exerts only direct effects on subjective career success. Mentoring exerts both direct and indirect, through networking and provision of mentoring, effects on objective career success. Therefore, the results suggest that although objective career success is a predictor and antecedent of subjective career success, it is not the most important one.

Furthermore, the relationship between objective and subjective career success is far from perfect. This pattern confirms suggestions and empirical findings (e.g., Gattiker & Larwood, 1986; Korman, *et al.*, 1981; Nicholson, *et al.*, 1985; Van Maanen & Schein, 1977) that objective and subjective career success, albeit related, must not be considered as going in parallel. The results are also in line with research suggestions that subjective career success is determined by both objective facts (e.g., number of promotions) as well as subjective facts and norms (e.g., perceived quality of relationships with others) (e.g., Gattiker & Larwood, 1988; Poole, *et al.*, 1993). They are also in line with suggestions that subjective criteria may weight more than objective facts in the determination of subjective career success (Nicholson & West, 1988; Poole, *et al.*, 1993).

### 8.2.2 THE INTER-RELATIONSHIPS BETWEEN MENTORING, NETWORKING AND PROVISION OF MENTORING

As expected, mentoring and networking were associated. This result is in line with the only quantitative study reporting on the relationship between mentoring and networking so far (Peluchette, 1993). Their association was the second strongest among the relationships identified. Only the relationship between mentoring and subjective career success was stronger. The relationship, however, was far from perfect. This is in line with implications and suggestions in the literature that networking and mentoring (i.e., primary mentoring) are related, but distinct phenomena (e.g., Kram & Isabella, 1985; Woodall, *et al.*, 1995). Furthermore, this result offers support for the way that mentoring and networking were defined and operationalised in the present investigation; and especially for the validity of the networking scale that was constructed as part of the present work.

From a causality perspective, mentoring was identified as an antecedent of networking. Receiving mentoring should increase one's attractiveness as a potential relationship tie (e.g., Aryee, *et al.*, 1996; DeFillipi & Arthur, 1994; Van Maanen & Schein, 1977). Furthermore, through the mentor the individual may be able to extend one's network outside one's work group or department. A complementary account is that mentoring and networking have some other common causes. The general pattern of results suggested that work involvement was moderately to strongly related, depending on the model, with mentoring and networking, especially mentoring.

Mentoring was also associated with provision of mentoring, a relationship which went according to expectations. The relationship was moderately strong, though weaker than the relationship between mentoring and networking. The suggestion is that the more mentoring the individual has received (or is receiving) the more likely she/he is to provide mentoring. The implication is that reception of mentoring prepares the ground for the individual to provide mentoring her/himself. Extending this implication at an organisational level, initiating or fostering a mentoring culture will probably lead to the formation of a "mentoring cycle". This finding supports and complements suggestions in the literature regarding the positive outcomes of provision of mentoring on the

organisation (e.g., by increasing organisational commitment) (e.g., Koberg, *et al.*, 1994; Zey, 1984; 1988). The positive effects of provision of mentoring for the organisation also seem to extend to the preparation of the next wave of mentors, helping the maintenance of the mentoring culture with all its positive consequences.

Networking was associated with provision of mentoring; despite that, the relationship does not appear in the causal models. This seems to be due to the regression procedure (stepwise) that was employed in the causal path analysis. Provision of mentoring was regressed to mentoring and networking, which are related to each other. The relationship between mentoring and provision of mentoring was stronger than the relationship between networking and provision of mentoring, which must have led to the exclusion of networking from the models. There is no direct literature on the relationship between networking and provision of mentoring. However, the relationship can be explained as follows: the more extensive the network of relationships that a potential mentor has, the more the likelihood to meet suitable protégés and to provide mentoring functions. Furthermore, extending Keele's (1986) credit theory of mentoring, it is reasonable to consider that the extensiveness of networks of an individual is related to one's attractiveness as a potential mentor.

### *8.2.3 THE EFFECTS OF MENTORING, NETWORKING AND PROVISION OF MENTORING ON CAREER SUCCESS*

Mentoring was found to relate to both objective and subjective career success, though in different ways and strengths. The analysis suggested that mentoring is directly related to subjective career success. In general, the relationship between mentoring and subjective career success was the strongest of all relationships that were identified in the causal path analysis. Mentoring was weakly related to objective career success. Its effects on objective career success are directed almost exclusively through its relationship with networking and, occasionally, provision of mentoring. This becomes apparent when the tables of the correlations are considered. The correlations between scores on mentoring and objective career success are weak, and mostly insignificant.



The above pattern of relationships of mentoring with objective and subjective career success is in line with the pattern identified by Turban and Dougherty (1994) in their causal path model, where the effect size of mentoring towards subjective career success was more than twice as strong as the effect size of mentoring towards objective career success. In Turban and Dougherty's (1994) model mentoring exerted direct effects on objective and subjective career success. However, they had not included networking in their investigation. Turban and Dougherty (1994) had used a sample of graduates working in a variety of organisations. The implication is that the present results can be generalisable, at least with respect to the effects of mentoring on subjective career success. Furthermore, this pattern seems to be in line with the implications made by Fagenson's (1994) study; that receiving mentoring may create a positive, yet rather unrealistic, self-image regarding the individual's position in the organisational environment. For this reason, mentoring relates mainly to perceptions about career success (which are under the "control" of the individual) rather than career success in objective terms which is a more adequate reflection of "reality".

According to expectations, networking was associated with both objective and subjective career success. The association of networking with objective career success was stronger and more direct than its association with subjective career success. The results suggested a direct causality relationship between networking and objective career success and a weaker and indirect relationship between networking and subjective career success. The pattern that was identified in the relationship between mentoring and objective career success does not seem, however, to be the same as the pattern in the relationship between networking and subjective career success. In fact, the correlation coefficients between networking and subjective career success were mostly stronger than the corresponding coefficients between networking and objective career success. It seems that networking did not emerge as a direct antecedent of subjective career success because of two reasons. The first reason is the obvious one; part of the effects of networking on subjective career success are exerted indirectly through its effects on objective career success. The second reason refers to the way the data were analysed. Networking was included along with mentoring in the prediction of career success. The relationship between mentoring and subjective career success was stronger than the

relationship between networking and subjective career success, hence, networking did not “survive” the stepwise procedure and it was not included in the final models. Therefore, it would be erroneous to consider that the direct effects of networking on subjective career success are negligible and its effects are exerted only indirectly.

One line of justification of the pattern regarding the relationships of mentoring and networking with objective and subjective career success can be provided on the basis of the suggestions that are made in the literature. A relationship with a mentor creates and enhances feelings of success, worth, competence and expectations for future success, that is subjective career success (e.g., Dreher & Ash, 1990; Kram, 1988). In a similar way, the relatively weak direct effect of networking on subjective career success can be accounted for by considering the conceptualisation and operationalisation of subjective career in the present work (e.g., according to Gattiker and Larwood (1986)). Respect and acceptance by colleagues contribute to subjective career success. Networking involves relationships that are based on respect, acceptance and trust (e.g., special and collegial peers), but also a greater number of relationships that are not based on these qualities (e.g., information peers).

Consideration of the particular organisational context in which the present work was conducted, however, can provide another, more specific, account for the overall pattern of relationships that was identified. The recommendation of the head of department is taken into account by the relevant committee when the decisions concerning promotions are made. The head of the department can be the mentor of an employee. In most cases, however, the mentor is an individual who is hierarchically below the head of the department. It is reasonable to consider that the mentor can influence the opinion of the head of the department regarding the focal employee in two ways: (a) directly (not suggesting or implying “intention”); or (b) indirectly, by exposing the subordinate to the head of the department. In this case the head of the department becomes part of the subordinate’s network. This provides an account for the indirect relationship between mentoring and objective career success, through networking. The above consideration can also provide the basis for accounting for the direct causal relationship between networking and objective career success that was identified. The promotion decision is made by a committee. Being known (e.g., having been exposed) to

anyone (or some) of the committee members should increase the likelihood for a favourable promotion decision (provided that the impression was positive). Some of the ways in which this exposure or introduction can be made include: the direct initiative of the employee; via other network ties of the employee; or via the mentor. Therefore, not only does this consideration provide support for the direct effect of networking on objective career success, but also it provides additional accounting for the indirect relationship between mentoring and objective career success. Finally and importantly, it provides support for the (rather difficult) decision to consider mentoring before networking when direction of causality was considered.

The analysis regarding the relationship of provision of mentoring with career success yielded mainly negative results. It is highlighted that provision of mentoring did not “survive” the stepwise procedure in any of the causal path models. In the cases that it was included in the models it was made either on the grounds of “meaningfulness” (e.g., in the model for men respondents it approached significance and its coefficient was not considerably lower than the coefficient of networking) or in order to provide the reader with an indication of the relative effects of provision of mentoring, mentoring and networking. The only relatively considerable contribution of provision of mentoring was when male respondents were considered (Figure 3.2); where provision of mentoring exerted its effects on career success in terms of a direct effect on objective career success. Provision of mentoring also made some weak contribution to objective career success when all respondents were considered as well (Figure 3.3). Following the literature, one line of account for these relationships is that the performance of the mentor is enhanced by delegation of tasks to and co-operation with subordinates (e.g., Kram, 1988; Nykodym, *et al.*, 1995). Considering the present context, development of the subordinates may be noticed by the head of the department or other individuals in the organisation. Furthermore, provision of mentoring to subordinates should increase the liking, respect and appreciation of the subordinates towards the mentor. This appreciation may be shown by the protégés in their interactions with the head of the department and/or other ties in their networks. This may have effects on objective career success through the promotion procedure. The lack of consistency in the relationship across models, however, makes any attempts for generalisation rather redundant; and questionable in

terms of validity. Nevertheless, the lack of a consistent contribution of considerable strength of provision of mentoring on objective career success appears to be in line with reports from empirical work. Evans and Gilbert (1984) found that the superiors of the respondents who were providing mentoring functions considered provision of mentoring functions as an unimportant facet of performance; presumably, not taking such behaviours into consideration in the allocation of rewards.

Regarding the effect of provision of mentoring on subjective career success, the lack of a direct relationship is not what was expected considering the suggestions that are found in the literature (e.g., Hall & Kram, 1981; Kram, 1988). In fact, it would be expected that provision of mentoring would be more strongly related to subjective career success than to objective career success. Furthermore, provision of mentoring was virtually absent from the women's model.

The above pattern of results, however, should not lead to the conclusion that provision of mentoring, at least as it was operationalised in the present work, does not make important contributions to objective and, especially, subjective career success; and the consideration of provision of mentoring should not be seen as unnecessary for practical reasons. Such a conclusion would be premature. Provision of mentoring was correlated to mentoring and, to some extent, to networking. The correlation coefficients of mentoring and networking with the indices of career success were stronger than the corresponding correlation coefficients of provision of mentoring with the career success indices. Therefore, the inability of provision of mentoring to make a substantial consistent contribution to the causal path models can be partly attributed to the stronger contributions that the related variables of mentoring and networking made to these models; that is provision of mentoring was "forced out" of the models by mentoring and networking. This consideration is supported by the fact that provision of mentoring made its most substantial contribution in the causal path model that was developed exclusively for the male respondents (Figure 3.2). It exerted a direct effect on objective career success, but no direct effect on subjective career success. The path coefficients from provision of mentoring and networking towards objective career success were of comparable sizes (.274 and .305, respectively). The correlation coefficient between provision of mentoring and objective career success ( $r = .30, P < .05$ ) was comparable in

strength to the coefficient between networking and objective career success ( $r = .34, P < .05$ ). In contrast, the corresponding correlation coefficients between provision of mentoring and mentoring with subjective career success were  $.56 (P < .001)$  and  $.22 (ns)$ , respectively. The above pattern of correlations can explain the pattern of relationships with respect to provision of mentoring that emerged in this causal path model. In no other case (i.e., sub-sample) were the correlation coefficients of provision of mentoring with an index of career success of comparable strength to the corresponding coefficients of mentoring or networking with that index of career success. There is yet another fact that suggests that the contribution of provision of mentoring to career success merits consideration. Provision of mentoring was found to be predictive of subjective career success, though not of objective career success, when work involvement, a variable strongly related to provision of mentoring and to career success, was not included in the set of predictors.

Summarising on the effects of provision of mentoring, it seems that in the present organisational context, provision of mentoring does contribute to objective career success, but not in a particularly strong or consistent way. Provision of mentoring makes some contribution to subjective career success though this contribution is substantially lower than the contribution made by mentoring. More research on the relationship between provision of mentoring and career success, especially subjective career success, is deserved. Furthermore, the relationship between provision of mentoring and career success may not be of considerable strength in the present context, but it may acquire importance in different organisational environments. Research in this direction is needed as well.

#### *8.2.4 PERSONALITY EFFECTS ON INTER-PERSONAL RELATIONSHIP VARIABLES AND CAREER SUCCESS*

##### *Personality Effects on Inter-personal Relationship variables*

The relationships of the personality traits with mentoring, networking and provision of mentoring were mostly consistent with the expectations. Extraversion and Tough-Mindedness were the personality traits that were most consistently associated

with mentoring, networking and provision of mentoring. Independence, however, was also included in some of the models.

Extraversion exerted direct effects on networking. This was probably the most intuitive of all relationships. Some of the characteristics associated with Extraversion include forthrightness, liveliness, spontaneity, tendencies towards social participation, group-orientation and need for affiliation (Russell & Karol, 1995). Possession of such characteristics should relate to the number of relationship ties that an individual develops in one's work organisation (or in any social space). In fact, it was rather a surprise that the effects of Extraversion on networking were not stronger. This can be partly attributed to the fact that the mean score on Extraversion was rather high (5.93 with standard deviation 1.92), meaning that most respondents possessed relatively high degrees of the characteristics associated with Extraversion. This homogeneity can have attenuated the relationship between Extraversion and networking. Another, complementary, account is that, along with the characteristics that were presented above, high scores on Extraversion, may also involve venturesomeness and thick-skinnedness (Russell & Karol, 1995). These characteristics must reduce one's attractiveness as a relationship tie.

Extraversion, however, was absent from women's models. Following the above consideration, this can be partly attributed to the relatively high levels of Extraversion (mean: 6.21; standard deviation: 1.88) that were found in women respondents. In contrast, men's scores were significantly lower. This result, however, can be also attributed to the greater importance of personality traits for men's career attainment than for women's career attainment, as it is suggested by research findings (e.g., Melamed, 1996b).

Tough-Mindedness exerted direct negative effects on mentoring. The relationship was the most consistent among the relationships between personality and mentoring or networking. Its effects on networking and provision of mentoring were indirect (apart from the model for women respondents in grade 5 and above, where a direct effect on provision of mentoring was identified), hence, substantially weaker. These effects were exerted through its effects on mentoring. Characteristics which are associated with Tough-Mindedness include lack of receptivity, reluctance to engage in experiences and emotional detachment from the others (Russell & Karol, 1995). Possession of some or all

of these characteristics in high degrees must reduce the likelihood for an individual to receive mentoring. To provide a simplistic illustration, lack of receptivity to suggestions should reduce the likelihood to accept the advice of a (potential) mentor; hence, at least two important mentoring functions, career guidance and counselling, are seriously inhibited. Emotional detachment from others should reduce the likelihood for the development of an intimate relationship; hence, mentoring functions such as friendship, acceptance and confirmation, and protection are also inhibited.

Although no direct effect of Tough-Mindedness on provision of mentoring was identified (apart from the model for the “senior” women respondents) it should not be considered that a relationship does not exist. A causal path between Tough-Mindedness and reception of mentoring was not identified probably because their association was weaker than the association between Tough-Mindedness and mentoring, “forcing” provision of mentoring out of the models. Furthermore, Tough-Mindedness was included in the hierarchical regression for the prediction of provision of mentoring on the basis of personality traits, after controlling for human capital variables. This supports the suggestion made at the beginning of the paragraph.

The effects of Independence were rather mixed and not always intuitive. Furthermore, an inconsistency in its effects was identified across the gender-specific models.

Independence exerted direct negative effects on mentoring in both of the causal path models that were based on data collected only by male respondents (Figures 2.2 and 3.2). This effect was consistent with the expectations. Some of the characteristics that are associated with high scores on Independence include dominance, forcefulness, thick-skinnedness, suspiciousness and scepticism (Russell & Karol, 1995). Possession of some or all of these characteristics in high degrees by an individual must decrease the likelihood of receiving mentoring. A potential mentor must feel repelled by thick-skinned individuals who try to dominate their social environment. On the other side, a vigilant and suspicious individual must be less likely to allow the development of an intimate relationship. Independence did not exert any effect on mentoring in the women’s or the mixed-gender models.

On the other hand, Independence exerted a direct positive effect on networking, in the causal path model that included all female respondents regardless of grade (Figure 2.3). In fact, in the stage of the construction of the causal path models, the effect was considered to be considerably strong, so it was decided to include the path in the model despite the calls for deletion of paths on the grounds of meaningfulness. One interpretation of the effect is in terms of chance. Its identification can be attributed to a biased sample. This would be consistent with Pedhazur's (1982) note, that the criterion of meaningfulness of a path becomes especially important when the sample size is large. At that point, it had been considered that this can become pertinent to the present work in the models where all women's responses, or all responses regardless of respondents' gender, were included. Another interpretation, however, can be in terms of some of the characteristics that are associated with the Independence global factor of the Cattell 16PF5. Some other characteristics, along with those presented in the previous paragraph, that are associated with Independence include social boldness and experimentation. The primary factor "Social Boldness" contributes to the estimation of scores in both Independence and Extraversion (Russell & Karol, 1995). In the present analysis, Independence and Extraversion were found to be associated across all sub-samples (correlation coefficients ranging from .30 ( $P < .05$ ) to .57 ( $P < .001$ ) with a median correlation of .44 ( $P < .001$ )). Extraversion exerted consistent positive direct effects on networking. Therefore, the identified path may be the result of a systematic relationship and not of chance.

Furthermore, it must be kept in mind that mentoring and networking, as defined and operationalised in the present work, are related, but different phenomena. Therefore, some types of behaviours that increase the likelihood for the development of the one may decrease the likelihood for the development of the other. For instance, thick-skinnedness may repel most potential mentors; however, it may be an advantage in the development, utilisation, or perceptions of the existence of weak tie relationships. In addition, dominance and forcefulness, that may reduce one's attractiveness to a mentor may be seen as positive characteristics by colleagues because they are associated with perceived power according to Lord, *et al.*'s (1986) conclusions. Of course, these considerations are speculative. Only further research can resolve the issue.



The differential type of effects that Independence exerted on mentoring and networking by gender is interesting. Possession of high levels of the characteristics associated with Independence was identified as an advantage for network building in the case of women. However, it was identified as a disadvantage for mentoring, and via causality, networking in the case of men. This differential type of effect, if further substantiated, may be important. It runs counter to the common, largely anecdotal, belief; that characteristics such as dominance, forcefulness, venturesomeness, social boldness and experimentation may be associated with the creation of negative impressions for women, but with the creation of positive impressions for men. This view must have been developed with the consideration of male-dominated social environments. The interesting implication of the findings, then, is that the traditional impression may not apply in work environments where women are dominant in terms of numbers and where women are not under-represented in the middle and upper organisational levels. In fact, the present results suggest that this pattern may be reversed in these types of organisations. Of course, research is needed to substantiate this finding or to identify other patterns of relationships that are in line with the present pattern.

The absence of any effects of Self-Control on mentoring, networking and provision of mentoring was in line with the expectations. In fact, considering the hierarchical regression models, Self-Control made negative contributions on mentoring and networking in men's and women's models, respectively. It had been considered that the positive effects of Self-Control on the attraction of mentors and other ties must be counterbalanced by its inhibitory effects on the initiation of relationships with others. Characteristics that are associated with Self-Control include adherence to the rules, dutifulness, organisation, perfectionism and self-discipline (Russell & Karol, 1995). Exhibition of behaviours that are associated with these characteristics must increase the likelihood to be approached by a mentor and, in general, to be considered as a valuable tie by other organisational members. On the other hand, characteristics that are associated with high scores on Self-Control also include caution, seriousness and lack of spontaneity (Russell & Karol, 1995). Possession of these characteristics must reduce the likelihood of initiation and development of relationships with others.

### *Personality Effects on Career Success*

Regarding the relationship between the personality variables and career success, the findings were largely in line with the expectations. The effects of personality factors on objective career success were mainly indirect, through effects on mentoring and networking. In particular, the indirect effects of personality traits on objective career success were mainly exerted by Extraversion and Tough-Mindedness; with Independence also exerting indirect effects on objective career success in some cases.

Extraversion exerted its effects on objective career success through its effects on networking. Tough-Mindedness exerted its indirect effects on objective career success through its effects on mentoring (the effects of mentoring on objective career success were directed through its effects of networking and provision of mentoring). Independence exerted indirect effects on objective career success, through its effects on mentoring and networking, depending on the model. However, the effect that was directed through mentoring (identified only for men's models) was very weak; as it followed the mentoring-networking path. The effect of Independence on objective career success through networking was identified only in the model that was developed for all women respondents (Figure 2.3). Whether the identification of this effect was the result of sample bias or a systematic relationship, and its potential implications are issues which were discussed in the previous section.

Personality, however, also exerted direct effects on objective career success. In particular, Tough-Mindedness exerted a positive effect on objective career success. This was also in line with the expectations. Resolution, objectivity, practicality and solution-orientation are some of the characteristics that are related to Tough-Mindedness (Russell & Karol, 1995). These characteristics should be needed for someone to advance in the organisational hierarchy. Furthermore, the primary factor "Openness to Change" of the 16PF5 loads negatively on Tough-Mindedness. The negative pole of openness to change is associated with a preference for the traditional and the familiar and a lack of tendency towards experimentation (Russell & Karol, 1995). Despite the fact that changes have occurred in the British higher education in the last decade, it can be considered as a relatively stable industry in comparison to other industries (e.g., in terms of changes, "products" offered, redundancies). In addition, clerical and administrative posts do

require considerable degrees of attachment to rules and procedures. Hence, preference for and attachment to tradition and lack of experimentation may provide an advantage in terms of career advancement for clerical and administrative employees working in the higher education. Finally, Tough-Mindedness is associated with tendencies for lack of attachment to and emotional distance from the others (Russell & Karol, 1995). This suggests another mechanism for the direct effect of Tough-Mindedness on objective career success. It is possible for an individual to advance in grade by applying for a more highly graded job in another part of the organisation. This would involve a detachment (many times untimed) from one's current colleagues. Lack of attachment to colleagues should increase the likelihood of both applying for an attractive internal post and making the decision to accept the new job in the case that the application is successful.

The strongest effects of personality factors on subjective career success were direct and negative. They were mainly and most consistently exerted by Anxiety. In addition, Independence was also identified as exerting direct effects on subjective career success in two cases. These were the general models, that included data from all respondents regardless of grade. The findings were according to expectations, especially regarding the effects of Anxiety. They were also in line with suggestions and empirical findings which refer to the relationship between dispositions and satisfaction with aspects of working life (e.g., Arvey, *et al.*, 1989; Gattiker & Larwood, 1988; Landy, 1989; Staw, *et al.*, 1986). Characteristics that are associated with Anxiety include emotional instability, vigilance, apprehension, self-doubt, tension, impatience and low self-esteem (Russell & Karol, 1995; Rieke & Conn, 1994). Possession of these, or some of these characteristics, in high levels must be associated with perceptions and interpretations of work and career related facts in a negative light. This consideration is supported by the very limited studies on personality related variables and subjective career success, which have identified negative relationships between the latter and sense of competence (e.g., Aryee, *et al.*, 1993) or self-esteem (Peluchette, 1993).

The negative direct effect of Independence on subjective career success may be caused partly for different reasons from those that are behind the effect of Anxiety on subjective career success. Some of the characteristics that are associated with high scores on Independence include dominance, openness to change, persuasiveness, and a need for

independence. Independence emerged as a direct cause of subjective career success only in the models that included all respondents, regardless of grade. Most of the respondents (61.8%) were in grades below grade 5. They had relatively low levels of responsibility, power and latitude of behaviour. Therefore, it should be expected that individuals who possess the above characteristics that are associated with Independence should have a tendency to report more negative feelings regarding their careers. For instance, individuals with high need for independence and a need to dominate should develop negative attitudes towards situations where they are given directions; or towards situations in which they have less power from many other organisational members. When these individuals find themselves in organisational grades where they have more power (e.g., in grade 5 and above), independence in their work, and they have more latitude in their behaviour they must be less likely to develop negative feelings towards their careers.

The finding on the effects of Independence on subjective career success makes also some implications regarding moderating effects of career stage on the relationship between certain personality traits and career success. Investigation of effects of career stage on the relationship patterns was not among the aims of the present work. However, the above account implies that certain personality traits, like Independence, may play different roles for career success at different career stages. No conclusions can be drawn on the basis of the above result. However, this is an issue which could and should be investigated with the use of research specifically designed for that reason.

Personality also exerted indirect effects of considerable strength on subjective career success. The bulk of these effects was directed through the very strong path between mentoring and subjective career success.

Tough-Mindedness exerted the most consistent indirect effects of personality on subjective career success, through its effects on mentoring. The bulk of the indirect effect of Independence on subjective career success was also exerted through its negative direct effects on mentoring. This effect, however, was identified only in the models where responses received by men were included. The positive indirect effects of Independence on subjective career success, that were exerted through its effects on networking, were of very low strength. Furthermore, they were identified only in one of the causal path

models. The differential effects of Independence on mentoring and networking by gender, and their implications regarding the effects of organisational demography in gender terms on the relationship between personality and informal social relationships, have already been discussed.

Summarising on the effects of Tough-Mindedness on career success, the effect is differential. Its effect on objective career success is largely positive. As it can be seen from the effect coefficients, the negative effect of Tough-Mindedness on objective career success is very weak; as it is exerted through the path mentoring-networking. In contrast, the effect of Tough-Mindedness on subjective career success is largely negative. The positive effect is considerably weaker than the negative effect; as the positive effect is exerted through the effect on objective career success. The suggestion is that individuals who show the characteristics associated with Tough-Mindedness are more likely to achieve promotions (and, consequently, to attain higher organisational levels and salaries). However, they are less likely to feel successful about their careers.

This consideration regarding the effects of Tough-Mindedness on objective and subjective career success, if valid, should be considered as referring only to careers in organisational environments. This is because the negative effects of Tough-Mindedness on subjective career success are exerted through its effects on mentoring. Mentoring is considered to be a universal phenomenon that occurs in many domains of adult life. In the present work, however, following the literature, mentoring has been considered in the context of the organisation environment (e.g., Collins, 1994; Kram, 1986; 1988; Roche, 1979; Dreher & Ash, 1990). The suggestion is that, apart from the obvious need for further validation of the present results in organisations of various types, the concept and the role of mentoring may need to be considered on a new basis when careers outside the organisational environment are considered. A postulation can be that Tough-Mindedness may have mainly positive effects on subjective career success, through its effects on objective career success, when individuals whose careers are not attached to organisations (e.g., self-employed individuals) are considered. Of course, however, in these cases the relationship between Tough-Mindedness and objective career success may also be different. The above consideration only further underlines the need for additional research.

The lack of relationship between Self-Control and objective career success can be explained in two mutually exclusive ways. The one refers to the fact that the correlation coefficients between Self-Control and Tough-Mindedness were considerably strong (ranging from .44 ( $P < .001$ ) to .55 ( $P < .001$ ) across sub-samples, with a median .475). The implication is that Tough-Mindedness was included in the causal models at the expense of Self-Control; because the correlation coefficients of the Tough-Mindedness with objective career success were stronger than the corresponding coefficients of Self-Control with objective career success. This account seems reasonable. However, it is not consistent with the lack of a systematic pattern in the relationship between Self-Control and objective career success (e.g., correlation coefficients ranging from -.12 (*ns*) to .19 (*ns*), with median .015). This apparent lack of relationship leads to the second account, that possession of high levels of the characteristics that are associated with Self-Control may not be an advantage in terms of career attainment in the parts of organisations that were employed in the present work. This can be explained in terms of the nature of the industry where these organisations belong. Higher education is a relatively stable sector of the economy. The “stakes” cannot be considered high. Possession of high degrees of characteristics such as perfectionism, dutifulness, organisation and self-discipline may be an advantage for career advancement in organisations that operate in unstable environmental conditions. These characteristics are associated with job performance (e.g., Barrick & Mount, 1991; 1993). Job performance must be critical in organisations which are embedded in unstable environments. Hence, it should have direct effects on objective career success within commercial organisations operating in such environments. In relatively stable industries, however, such as the Higher Education, variations in job performance should have considerably fewer consequences. This explanation, along with the present result, is in line with Melamed’s (1996b) finding of a negative relationship between Self-Control and managerial grade in a sample of managers from the public sector.

Finally, the identification of a lack of relationship between Self-Control and objective career success is in line with Schneider and Hough’s (1995) suggestions. They suggested that objective career success should not be considered as the natural outcome of work performance. It is also in line with empirical findings (e.g., Scandura, 1992) of a

lack of relationship between performance and objective career success. Therefore, the present result on the relationship between Tough-Mindedness and career success may be generalisable to most work environments. Of course, further research, employing measures of performance when possible, is needed.

### 8.3 GENDER DIFFERENCES

#### 8.3.1 *GENDER DIFFERENCES IN MENTORING AND PROVISION OF MENTORING*

According to expectations, women reported higher scores on mentoring. This difference can be largely attributed to the fact that in the higher organisational levels women are not outnumbered by men. Therefore, women must not encounter a situation where women mentors are not available; as it is suggested to be likely to happen in organisations where the upper hierarchical levels are numerically dominated by men (e.g., Ibarra, 1993; Schneer & Reitman, 1994). Hence, a number of factors which have been proposed to account for the allegedly lower levels of mentoring that women receive are not present in this context. These factors included demographic similarity in terms of gender (e.g., Kanter, 1977; Tsui & O'Reilly, 1989); complexities of the internal part of the relationship (e.g., discomfort due to the possibility of increased intimacy, inadequate role modelling) (e.g., Kram, 1983; Kram & Isabella, 1985); and, especially, complexities of the external part (e.g., public scrutiny) of the relationship (e.g., Kram, 1988). In the present organisational context, these should not be issues of primary concern for women protégés in the development of relationships with mentors, and vice versa. Potential women mentors seem to be equally available as men mentors.

In addition, reluctance from the part of the mentors to mentor women because of low expectations (e.g., Nieva & Gutek, 1981) should not be an issue in the present case. Women who have reached relatively high organisational levels should have had motivation to commit themselves to their work and to advance. Therefore, they should project their experiences to other women who are at lower organisational levels, giving credit to to-be-protégés women in terms of expectations regarding motivation and commitment. It is considered that in most cases individuals at their middle and later

career, and life, stages feel the need to pass their experience to newer organisational members whom they see as similar to themselves (e.g., Erikson, 1963; Hall, 1976; Kram, 1988). Therefore, in the present context, demographic similarity in terms of gender should enhance women's possibilities to receive mentoring.

Furthermore, the lower quality of mentoring that it is suggested women may receive (e.g., Noe, 1988b) should not be an issue in the present context. Ibarra (1993) had noted that women protégés may be more difficult to include in the mentors' networks in male-dominated organisations. Earlier in the present work, it was suggested that the strength of the relationship between mentoring and career success by gender should be an index of any gender differences in the quality (conceptualised as effectiveness) of mentoring. Mentoring made equally strong contributions to scores on subjective career success for both genders. Mentoring was not found to be directly related to objective career success in any of the models. However, mentoring initiates the causal link with networking. Networking emerged as a predictor of objective career success only in the women's hierarchical regression model. These results suggest that women receive at least equal, if not greater, benefits as men from mentoring relationships in the organisational context employed in the present work.

In line with the expectation regarding provision of mentoring, women reported higher scores on provision of mentoring than men. In fact, the gender difference in scores on provision of mentoring was significant at a higher level than the gender difference in scores on mentoring. This can be partly accounted for by the ratios of women to men in low and middle/high hierarchical levels in the present organisations. The gender similarity account (e.g., Kanter, 1977), which has already been invoked, provides the background for this explanation. Women mentors are more likely to have women protégés (Ragins & Scandura, 1994). Considering all three organisations, the ratio of men to women in hierarchical levels below grade 5 is approximately 8 to 1; the ratio in hierarchical levels in and above grade 5 is one. Only respondents who indicated being in grade 5 and above were included in the analyses where provision of mentoring was considered. Therefore, women who are in the higher organisational levels should have more choice, possibilities and alternatives to provide mentoring to same-gender protégés than their male counterparts.



Considering the mentoring relationship from a “bottom-up” perspective (i.e., protégé-mentor), there are roughly equal numbers of potential female and male mentors in grade 5 and above. Hence, women and men at lower organisational levels should have similar chances to find a mentor of the same gender who is at grade five or above. However, it was decided that the lower organisational level which justifies consideration for provision of mentoring functions is grade 4. At this grade the approximate ratio of women to men is in favour of women (it is estimated to be at the levels of 2 - 3 to 1<sup>12</sup>). The above facts, should account for the greater amount of mentoring that women report; but also for the fact that the significance level for the gender difference in mentoring was lower than the significance level for the gender difference in provision of mentoring.

The above accounts regarding the observed gender differences in mentoring and provision of mentoring seem to be “sensible”. They are in line with most theoretical considerations and the suggestions regarding the issue of gender and mentoring. The above explanations, however, are not in line with most empirical findings which suggest that potential protégés or potential mentors do not indicate preference for mentors or protégés, respectively, of the same gender (e.g., Alleman, *et al.*, 1986; Olian, *et al.*, 1993). Therefore, the accounts that are provided in the previous paragraphs may be simplistic. On the other hand, however, it should be kept in mind that the empirical work quoted above, was mainly based on either self-report data (e.g., Olian, *et al.*, 1986); or experimental designs (Olian, *et al.*, 1993). Individuals may not be willing to overtly accept that they show prejudice, or even preference, with respect to the gender of their protégés or mentors.

A complementary explanation to those presented above for the observed gender differences in mentoring and provision of mentoring relates to gender differences in personality traits. This consideration is in line with one of the main purposes of the present work, the investigation of the relationship between personality traits and inter-personal relationships variables. In the present work, considering all respondents regardless of grade, the gender difference in Tough-Mindedness and Independence was significant at the .10 level, with men scoring higher. Considering respondents in grade 5 and above, the gender difference in Tough-Mindedness was significant at the .10 level. Tough-Mindedness and Independence were found to make significant negative

contributions to scores on mentoring. Tough-Mindedness also made a significant negative contribution to scores on provision of mentoring. One of the main characteristics that is associated with high scores on Tough-Mindedness is lack of receptivity to the new. Some of the characteristics that are associated with Independence are nonconformism and disagreeableness (Russell & Karol, 1995). The implication is that it may be the lack of agreeableness, acceptance of new experiences and conformism that men show in relation to women that, at least partly, accounts for the gender differences in mentoring and provision of mentoring. This implication was tested in the analysis part of the present work and support for it was found. When mentoring was regressed on gender controlling for Independence and Tough-Mindedness the contribution of gender to scores on mentoring was not significant; in contrast, the gender difference in scores on mentoring without taking into account Independence and Tough-Mindedness was significant. When provision of mentoring was regressed on gender controlling for Tough-Mindedness, the contribution of gender to scores on provision of mentoring was significant at .05 level; the gender difference in scores on provision of mentoring when no control for Tough-Mindedness was imposed was significant at .01 level.

The “personality” explanation for the gender differences in mentoring and provision of mentoring should be seen as working in concert with the explanation that invokes the apparent lack of male dominance in the organisations employed in the present investigation.

### *8.3.2 GENDER DIFFERENCES IN NETWORKING*

According to expectations, women scored higher scores than men on networking. This difference can be attributed to the ratio of men to women in the organisation. As in the case of mentoring, perceptions of similarity (e.g., Alderfer, 1987) offer a theoretical background for this finding. Furthermore, due to the fact that women do not seem to be underrepresented in the middle and high hierarchical levels, deliberate exclusion of women from emergent organisational networks (e.g., Melamed, 1995b) is not very likely.

The significant gender difference on networking, however, is due to the very large gender difference in expressive networking. There was no gender difference in

instrumental networking. The most obvious explanation for this finding is the balanced numbers of women and men in the middle and high hierarchical levels. The instrumental part of the networking scale contains items (e.g., “I keep in touch with a number of people in the organisation who are at higher levels than I am”) responses on which should be affected by this factor. An additional, and complementary, explanation to the above is that women may not consider networking as important for their careers (e.g., Cannings & Montmarquette, 1991; Gaskill, 1991). They may see mainly relationships with others, especially other women, as a tool for exchange of feelings and personal information and they may not recognise instrumental value in such relationships. There are three patterns in the present results that imply support for this account.

First, educational attainment made a significant contribution to women’s model for objective career success, but not to the corresponding model for men. Furthermore, work involvement made a more significant contribution to women’s subjective career success model than to men’s model. These findings are in line with empirical work and suggestions that women rely more on qualifications and formal routes (e.g., hard work) and less on informal procedures, such as networking, to advance their careers (e.g., Cannings & Montmarquette, 1991; Melamed, 1995a; Nieva & Gutek, 1981).

Second, it was found that Extraversion accounts more for women’s scores on instrumental networking than it accounts for men’s scores. This pattern was not found for expressive networking. The implication is that, in the present organisational context, women’s higher levels of Extraversion played a role in their participation in networks that are considered instrumental. Extraversion is a personality trait; hence it must be considered stable over time and very difficult to modify. That is, in the present organisational context, women’s participation in instrumental networks can be characterised less intentional than men’s participation in such networks; because it is partly due to a deeply entrenched personality trait.

The third point may be the most important and it is complementary to the others. It refers to the direction of the relationship between expressive and instrumental networking when respondents from each gender are considered separately. The direction of the relationship was negative for women and positive for men, while the strength was similar. One way to interpret this finding is in terms of the suggestion that women do not

make use of networks in the way men do. To illustrate, women may not use relationships with special peers in order to gain access to individuals at higher organisational levels. Having satisfactory expressive relationships may be considered perfectly adequate by women, inhibiting them from developing weak tie relationships. In contrast, men make use of their strong tie relationships in order to build instrumental relationships. This result is in line with Ibarra's (1992) finding that women's instrumental and expressive networks tended to be distinct whilst men's were largely overlapping. There are other ways, however, to interpret the finding. For instance, because men are the numerical minority in the organisation they have less latitude of choice regarding the composition of their homophilous networks. Hence, their instrumental and expressive networks overlap. Therefore, the former consideration cannot be accepted with certainty. Nevertheless, this finding adds support to the suggestion that women and men perceive and utilise their networks differently.

Beyond the above considerations regarding gender differences in intentional utilisation of networks, the results are in line with suggestions that women's extent of representation in higher organisational levels is inversely related to their problems in establishing and participating in organisational networks (e.g., Brass, 1985; Kanter, 1977). Scores on networking made a significant contribution to women's hierarchical regression model for objective career success, but not to men's hierarchical regression model for objective career success. It seems, therefore, that networking is important for objective career success even when it is not consciously recognised as such.

Finally, the difference in the relative importance of networking for men's and women's objective career success is a seemingly important finding. It is in contrast to the suggestions and findings that networking is more strongly related to men's than to women's objective career success (Burt, 1992; Cannings & Montmarquette, 1991). These suggestions and findings have been made in consideration of or in organisational contexts that were male dominated. Therefore, the present findings support the notion that a shift from male-dominated organisational hierarchies will be accompanied by a change in the "traditional" patterns of relationships regarding the impact of certain factors and processes on men's and women's career success. An implication is that men in female-dominated organisations may encounter similar problems to the problems that

women allegedly encounter in male-dominated organisations. More research is needed to further substantiate the present finding.

### 8.3.3 GENDER DIFFERENCES IN CAREER SUCCESS

Regarding the gender differences in the indices of career success the pattern of results is in line with expectations and with past research (Cox & Harquail, 1991; Herriot, *et al.*, 1993; Schneer & Reitman, 1990). Women were found to be significantly less successful than men in their careers when objective criteria for career success were considered. Women, however, reported feeling more successful with their careers than men.

In particular, women respondents reported having received fewer promotions and being in lower grades than male respondents; after a number of human capital, personality, and inter-personal (mentoring and networking) variables were taken into account. Furthermore, the structural factors (e.g., organisational culture, structure, organisational type) were largely constant. This result is in line with findings reported by a considerable number of authors (e.g., Cox & Harquail, 1991; Melamed, 1995b; Olson & Frieze, 1987). A number of authors have explicitly or implicitly attributed similar results to discrimination against women (e.g., Cox & Harquail, 1991; Melamed, 1995b; Morrison, *et al.*, 1987; Olson & Becker, 1983).

The unaccounted percentage for the gender difference in grade that was yielded in the present investigation, 44%, is below the value of 55% estimated by Melamed (1995b), who employed a sample from the general population and a different design. Melamed did not employ measures of mentoring and networking in his study, but he suggested that use of such measures could improve understanding (Melamed, 1995b, p. 311). This suggestion has also been made by other authors (e.g., Tharenou, *et al.*, 1994). Mentoring and networking are largely informal processes which should relate to discrimination (e.g., Larwood & Gattiker, 1985). Furthermore, Melamed (1995a) has noted that women should enjoy most favourable conditions in terms of career prospects in non male-dominated organisations, such as educational ones.

It seems that the present work supports the above considerations. The lack of male-domination in numbers is reasonable to be considered responsible for this lower “sex bias” indication. However, the percentage of the gender gap in grade that remains unaccounted for is very substantial. Furthermore, virtually all the variance in the gender gap in the number of promotions is unaccounted for. There are a number of factors that may be responsible for the unaccounted differences.

One factor refers to the scales of mentoring and networking that were used in the present investigation. In no case should they be considered exhaustive in their assessment of the phenomena. For instance, the mentoring scale assesses amount of received mentoring. Issues like the grade and power of the mentor, or ex-mentor, are not covered. However, even if such factors were taken into account it is unlikely that a negligible amount of the variance in the gender gap in grade would remain unaccounted for.

The next two factors that can explain the observed gender gap in objective career success refer to the organisational environment.

The first factor regards the “time lag” for any measures, including equal opportunities legislations, to start showing their effects. Part of the gender gap in objective, and maybe subjective, career success can be attributed to this lag effect. Time is needed for the effects of legislations, including equal opportunities, to show. Furthermore, if women have become more ambitious in terms of advancement aspirations, this should be a relatively recent phenomenon (partly encouraged by relevant legislation). In fact, the gender gap in indices of objective career success (e.g., earnings, grade) is officially acknowledged by the personnel officers and the workforce audit reports of the organisations employed in the present work. They note, however, that the situation is moving towards more equality (e.g., University1’s audit report compares the results of the 1992 audit with the results of the 1987 audit and reports some improvements).

The second factor may be the most important. It is complementary and related to the previous one. It regards the committee membership in the organisations employed in the present work. Despite that there is a gender balance in number ratios, there is a great gender imbalance regarding committee membership. For instance, in University 1 (from which detailed data were available) 58% of the 55 committees which were acting in 1992

included only one woman or no women at all; only one of the committees approached gender balance. A relevant note in the workforce audit report of the University is very explicit and descriptive. It notes that “the under representation or absence of women on University Committees restricts the contribution that women can make to decision making within the University”. The final decisions regarding promotions are made by relevant committees. The implication regarding women’s and men’s objective career success, especially promotions, must be clear. The actual values of the percentages of unaccounted variance in gender differences in objective career success provide support for this suggestion, and enhance its importance. Virtually all the variance in the gender difference in the number of promotions has remained unaccounted for (87.5%). This percentage is double than the percentage in the case of grade (44%). Research to investigate the extent of the validity of the suggestion is necessary.

There are two more possibilities regarding the observed gender differences in objective career success that are complementary to the above points. First, women may self-discriminate against themselves. Because of the impact of early socialisation and societal norms (e.g., Cox & Harquail, 1991; Spurr, 1990), women may have lower career expectations. There is some empirical work which is in line with this suggestion (e.g., Stevens, *et al.*, 1993). In line with this consideration is the suggestion that women show lower efficacy beliefs regarding their careers (Fagenson, 1990; Lent & Hackett, 1987). Lower career expectations can impact on objective career success (promotions and grade). The effect can be either direct (e.g., by making fewer requests for promotions) or indirect (e.g., by communicating it in their appraisal interviews, or in their interaction with the head of their department or other superiors). The above is a possibility which should be investigated in future research, as it seems to be promising. The second possibility, which is also complementary to the previous ones, is that behaviours that are exhibited by men (to be distinguished from male-stereotypical behaviours) are favoured more than behaviours that are exhibited by women, by both males and females. This makes men more likely to succeed in objective terms. This suggestion conforms to the suggestion that women are ascribed lower status than men, regardless of objective organisational position; and they are valued and treated accordingly (Ibarra, 1993; Ridgeway, 1991). This consideration is in line with the impression that is given by a

visual inspection of the models that were derived in the present investigation. The impression is that the personality predictor sets for objective career success show more similarity to the models derived for the male respondents than to the models derived for the female respondents; despite that females are the majority in the sample. Research on this issue is also worthwhile.

The present results regarding gender differences in objective career success make a number of implications. The consideration of two important, largely informal, inter-personal processes, mentoring and networking, can reduce the observed gender gap in objective career success, but only to a moderate extent. Certainly, it cannot eliminate the difference. Therefore, elimination of numerical under-representation of women in the middle and high levels of the organisation may be a necessary, but not a sufficient condition for a dramatic reduction in, or elimination of, gender differences in objective career success. Changes in structures (e.g., committee composition) or procedures (e.g., promotion procedure) seems to be necessary as well, at least in the short and medium term. Furthermore, internal-to-the-organisation equal opportunities legislations may require a considerable “time credit” to be proved fruitful. Even so, their effect may be considerably lower than anticipated if they are not accompanied by processual and procedural modifications and cultural shifts. The latter should happen at both an organisational and a societal level. The implications presented in this paragraph are in line with literature suggestions and empirical findings (e.g., Morrison, *et al.*, 1994; Spurr, 1990).

The great unaccounted percentage (89.4%) in the gender difference in subjective career success can be explained in terms of socialisation and societal norms (e.g., Russo, 1985; Spurr, 1990). Women may have lower career expectations than men; furthermore, they may have different priorities regarding their careers and other aspects of their lives.

Therefore, the gender differences in both objective and subjective career success can be largely attributed to societal factors, which act mainly indirectly in the former and mainly directly in the latter case. The implication is that legislation or even the shift away from numerically male-dominated organisational environments may not eliminate, or even substantially reduce, gender differences in indices of career success if societal “programming” does not change.



An interesting finding is that objective career success was not an equally good predictor of subjective career success for both genders. The results suggest that it is more important for women than for men. This pattern is rather counter-intuitive. Following suggestions regarding differential socialisation of women and men (e.g., Melamed, 1995a; Mincer & Ofek, 1982; Schneer & Reitman, 1993) it would be expected that objective career success should be more important to men's considerations and feelings than to women's considerations and feelings about their careers.

There seem to be no obvious explanation(s) for the above finding; apart from the fact that the investigation took place in a non-male dominated environment (or, at least, not entirely male-dominated environment). Public service organisations, such as education and public administration ones, offer better prospects to women in terms of career advancement; probably because of higher number of women and stricter equal opportunities policies (Melamed, 1995b; 1996b). Women may be aware of this fact and may join the work force in organisations which are perceived to (and, in fact, largely do) offer more opportunities for career advancement to women. The organisations and the incumbents employed in the present work conform to the above type (in fact, this was the very reason they were selected for the present investigation). The present sample was drawn from individuals occupying clerical and administrative positions in educational organisations. The implication is that women whose responses were used in the present investigation place considerable value on their career advancement. This can partly explain the fact that objective career success was a better predictor of subjective career success for women than for men, and further stresses the importance of investigating gender differences in career-related variables in "non-traditional" organisations.

Therefore, this finding offers support to one of the considerations that have been made earlier in the present work, that the patterns of relationships among variables may be considerably different in organisations which are not male-dominated than in organisations which are male-dominated. The latter type of organisation is the one that has been almost exclusively researched up-to-date. Therefore, this result justifies a significant part of the present work.

Furthermore, this finding suggests that a number of "truisms" may need to be reconsidered in organisations where the "traditional" balance in male-female numbers,

and power, is not present. If the reported shift (e.g., Northcraft & Gutek, 1993) in gender ratios in the middle and upper echelons of organisations continues, not only can gender differences in objective career success be shifted towards more equity (e.g., Tharenou & Conroy, 1994), but also the relative impact of objective career success on subjective career success may change too. Starting realising that their power and prospects are higher, women may start placing more expectations on their careers; hence, placing more emphasis on their career outcomes such as career advancement. This can be enhanced by the reported societal shift in terms of gender roles in the family/home domain. The shift towards “post-traditional families” (where the man is not the major breadwinner) may change the relationship between family status and career success (Schneer & Reitman, 1993). Women may start placing less emphasis on their roles at home, increasing simultaneously their emphasis on work roles and work outcomes.

Therefore, a combination of higher career expectations and more weight on work and career outcomes over home and family roles may dramatically increase the contribution of objective career outcomes on women’s subjective career success. On the other hand, however, this may have negative consequences for women’s feelings regarding their careers. Higher career expectations that, especially nowadays, are not always met, may lead to a reduction in positive feelings regarding career accomplishment. With reduced emphasis on success in the family domain, however, less chances for compensation in the case of unmet career expectations should exist.

Ironically then, as the gender gap in objective career success may be being reduced, the gender gap in subjective career success may be being reduced as well. Worse feelings and more worry about their career accomplishments may be the “price” that women will pay, or are already paying, for improvements in their career prospects in objective terms. Of course, systematic research is needed; first, to substantiate the present findings and second to investigate for the above implications and considerations.

#### *The moderating effect of organisational level on gender differences in Personality*

Finally, there is a finding that is not directly related to gender differences in career success, mentoring or networking, but it is considered worth commenting on. Considering all respondents regardless of grade, the gender difference in two personality

traits, Extraversion and Self-Control, was significant; the difference in two others, Tough-Mindedness and Independence, approached significance. However, considering respondents in grade 5 and above, only the gender difference in one personality factor, Extraversion, was significant; and the difference in another one, Tough-Mindedness, approached significance (an open line in considering and interpreting statistical significance is adopted here (Snedecor & Cochran, 1967)). The finding suggests that gender differences in personality traits tend to diminish as one ascends the organisational hierarchy. Of course, this pattern can be accounted for in terms of the lower number of respondents in grade 5 and above than the number of respondents in the whole sample. Nevertheless, this pattern is in line with previous research (Jackson, Paunonen & Rothstein, 1987; Melamed & Bozionelos, 1992b); hence, it deserves some consideration.

One line of explanation for the above pattern is that to be successful in their careers, women have to adapt to the managerial stereotype (Pfeifer & Shapiro, 1978; Schein, 1975; Steinberg & Shapiro, 1982; Templeton & Marrow, 1972); and the managerial stereotype conforms to the masculine stereotype (Brenner, 1982; Brenner & Greenhaus, 1979; Melamed & Bozionelos, 1992b; Schein, 1973). A complementary suggestion is that women whose personalities fit the masculine stereotype have an advantage. However, this does not seem to be the case in the present sample. Among the personality traits considered in the present work, Tough-Mindedness and Independence seem to be associated with the managerial/male stereotype, which is characterised by dominance, assertiveness and lack of sensitivity and nurturance (e.g., D.J. Rawls & Rawls, 1968; Rawls & Rawls, 1974). Tough-Mindedness is “loaded” by the 16PF5 primary factors Sensitivity and Warmth in the negative direction. The 16PF5 primary factor Dominance loads in the positive direction on Independence (Russell & Karol, 1995). No particular pattern seems to emerge when scores of women below grade 5 and scores of women in grade 5 and above in Tough-Mindedness and Independence are compared. Means for Tough-Mindedness and Independence were 5.05 and 5.11, respectively, for women in grades below 5; and 4.73 and 5.17, respectively, for women in grade 5 and above (none of the differences was significant). An implication of this pattern is that the suggestions regarding conformity to the male stereotype for women to advance may not hold for organisations that are not male dominated. Of course, these

data are very “weak” (i.e., non-significant differences). The implication that is made, however, is interesting and is in line with other, stronger, implications that are made by the results of the present investigation.

#### 8.3.4 *DIFFERENCES BETWEEN GENDER-SPECIFIC MODELS AND THEIR IMPLICATIONS*

Mentoring made a highly significant contribution to scores on subjective career success in both, men’s and women’s models. One factor of networking, expressive networking, made a more significant contribution to men’s scores on subjective career success than it did to women’s scores on subjective career success. These findings imply that participation in expressive networks may be very important for the perceptions of career success of groups of individuals who are numerical minorities in the organisation. Going somewhat further, another implication can be considered. Mentoring and participation in an expressive network may differ in terms of importance for the subjective career success of individuals who belong to groups that are the majority and the minority in the organisation, respectively. Mentoring may be equally important for both the minority group and the majority group. However, having a network of friendships (e.g., special or even collegial peers (Kram & Isabella, 1985)) may be considerably more important for the members of the group that constitutes the minority. This can be explained in terms of availability of expressive network ties (i.e., special and collegial peers). Individuals who belong in groups that are numerical majorities may take participation in expressive networks “for granted”. Therefore, although participation in expressive networks is beneficial for individuals who belong to the majority group it is not fully realised by them. On the other hand, individuals who belong to the group that constitutes the numerical minority must have more difficulties in participating in expressive networks (e.g., due to similarity judgements (e.g., Lincoln & Miller, 1979; Tsui & O’Reilly, 1989)). Therefore, they should value relationships with special and collegial peers more. Of course, further research is needed to substantiate the above findings; before any systematic research on factors that account for them is conducted.

A pattern that seems to have emerged is that the presence of personality factors is more dominant in the models that have been developed taking into account only male

respondents than it is in the models that were developed taking into account only female respondents. For instance, the causal path models that were developed using only responses from women were the only ones in which personality did not have a direct effect on objective career success. The suggestion is that variability in personality may not be as important when career success, especially objective career success, for women is considered. This is in line with research findings (e.g., Melamed, 1995b; 1996b). It is also in line with suggestions that women mostly rely on formal procedures to gain organisational rewards (e.g., Cannings & Montmarquette, 1991; Gaskill, 1991), because the present investigation showed that certain personality traits relate to the participation in informal organisational processes and structures, such as networks. This finding can be paired with the finding that educational attainment made a significant contribution to women's, but not to men's model for objective career success. Therefore, support is offered by the results to the consideration that women do not make "proper" use of other factors, apart from formal procedures or human capital, to advance their careers. If this is the case in an organisation where women dominate in numbers and are not under-represented in the middle/upper levels, the suggestion, that has already been made earlier on the basis of other part of the results, is that gender balance in numbers can only be the first step towards a gender equality in career success opportunities. "Time credit" is needed for women to form accurate perceptions of the realities of the organisational life. This suggestion is similar and complementary to the suggestions that were made above regarding the variance in gender differences in objective career success that was unaccounted for.

#### 8.4 LIMITATIONS

##### *Confidence regarding the Causality Relationships*

Cross-sectional research design was employed in the study. Variables were measured at the same point in time. Therefore, caution should exist regarding causality relationships. This issue has also been raised at the point where the causal path analysis was discussed and conducted. On the other hand, the development of the expectations, the statistical analyses and the development of the causal path models were based on the

literature (e.g., Kram, 1988; Turban & Dougherty, 1994) and rational considerations. Therefore, there is a good reason to consider that the present conclusions regarding causality relationships have validity.

Nevertheless, definite assertions regarding the validity of the models should not be made in non-experimental research (e.g., Asher, 1983). Therefore, the issue regarding concerns about validity is still present. It is present in both cases, when causality relationships between sets of variables (e.g., personality - mentoring/networking/provision of mentoring - career success) are considered, and when causality relationships within sets variables (e.g., mentoring - networking; objective career success - subjective career success) are considered.

To provide an illustration of the former case, the causal path models suggest that networking affects objective career success (or at least initiates the loop); and that mentoring has strong direct effects on subjective career success. The model is based on empirical findings and literature suggestions, fits the present data and is logical. However, it could also be argued that objective career success makes an individual more confident in initiating relationships and more attractive to the others, hence, arguing for the inverse relationship. Although this alternative account is less plausible it cannot be light-heartedly dismissed. Especially, as it is compatible with accounts regarding the tournament model of organisational careers (e.g., Rosenbaum, 1979). In the latter case, when bi-variate relationships among variables internal to the set (e.g., mentoring, networking, provision of mentoring) are considered, the problem may be even more subtle and complex; taking into account that the constructs relate to each other and that temporal relationships are very difficult to be clearly identified. An illustration of the issue has been given previously at the point where the issue of causality regarding the relationship between mentoring and networking was discussed.

There is an important point in the present investigation, however, which provides additional support for the causality order that was adopted. The causal models “fit” the work and promotion procedures that exist in the organisational context where the investigation took place (as it was discussed earlier in this chapter). This increases confidence regarding the validity of the models, at least as far as causality order is concerned. This point provides support to suggestions that the interpretation of results

obtained in uniform environments is safer because there can be specific knowledge of the factors that may influence the relationship patterns among the focal variables (e.g., Cannings, 1988; Gerhart, 1990). It also suggests that the loss in confidence in generalisation that is inherent in investigations that are conducted in uniform environments is at least counterbalanced by increased confidence for the validity of the results.

The drawback of the above “confidence boost”, however, is the implication that the models that were developed in the present investigation may be organisation-specific. This issue, which refers to the internal and external validity of the investigation, is tackled in the previous paragraph and it has been discussed when the research methodology of the investigation was considered. It was argued that a valid result can be used to guide further investigations which can further substantiate or amend it, so it can be applied under different conditions and in different contexts. An erroneous result, however, can be of very little or no use. Consequently, a number of suggestions for further investigation can be made with the necessary confidence that the present findings are valid. Nevertheless, it must be kept in mind that investigations where causality relationships are a vital point are more complete with the use of longitudinal designs, with all the inherent difficulties that their execution involves; and that absolute certainty regarding causality relationships should be seen as erroneous in cross-sectional research.

A final point is that the fact that a number of variables co-vary should not be seen as a definite proof that they are linked, regardless of rationales about causality. If they are linked, this may be only in an indirect way; by means of intervening variables or common causes. This should also be kept in mind.

#### *The Issue of the presence of Method Variance*

The data were gathered via self-report measures at the same point in time. Therefore, common method variance, which can inflate the observed relationships, is an issue that concerns the validity of the study (e.g., Campbell & Fiske, 1959; Spector & Brannick, 1995). It has been suggested that common method variance is less of a potential problem when self-report based measures of attitudinal constructs are investigated in relation to self-reported data (e.g., demographic information) that are

objective and verifiable (Podsakoff & Organ, 1986). Research suggests that self-report information of personal data is quite valid (e.g., Cascio, 1975; Schnerer & Reitman, 1993). Therefore, common method variance should be more of a potential problem when subjective career success was predicted, rather than in the prediction of objective career success. Use of self-reports, however, may be the most valid method of data collection when subjective perceptions regarding an issue (e.g., satisfaction with work related issues) are to be assessed (Schmitt, 1994).

Spector (1994) suggests that measures with high reliabilities provide some protection against method variance. All the scales that were included in the present investigation have demonstrated high reliability coefficients. It has been noted, however, that addressing the problem and dealing with method variance is a very complex issue and general guidelines or definite solutions (e.g., high reliability estimates, longitudinal designs) do not exist (Schmitt, 1994; Spector & Brannick, 1995).

Abandoning the line of technical considerations (e.g., reliability coefficients), Schmitt (1994) recommended that when the potential effects of method bias are considered, motivational issues should be taken into account. This suggestion can be transformed into the question “what motive(s) would the respondents have to systematically distort their responses?”. In the present work respondents were promised feedback on their personality profile and on the results of the study. In addition, confidentiality was assured. It can be assumed that the respondents would desire accurate feedback on their personality. Furthermore, although it cannot be asserted that the respondents had a genuine interest in the validity of the results of the study, the prospect of receiving such information should have enhanced their motives to respond genuinely. Of course, other issues remain. Although confidentiality was assured and it was mentioned that the unions were supportive of the study, this may have not been believed by some employees. For instance, some may have considered that the survey was “secretly initiated” by the top administration of the University in order to make use of the individual responses; or that the top administration of the University gave permission for the study with the promise to receive feedback on individual responses (in fact, this belief was implied by the comments that were made on one particular questionnaire that was returned incomplete). This is a possibility that cannot be completely rejected. If this



phenomenon has occurred, however, it must have done so in a very limited extent. Furthermore, in the few cases that such negative perceptions about the motives behind the study were present, it is reasonable to assume that individuals would prefer not to respond at all rather than to spend a considerable amount of time (more than one hour) faking their responses.

Finally, there is empirical evidence suggesting that common method variance is not a great threat to the validity of the results in organisational research (e.g., Campion, 1988; Crampton & Wagner, 1994; Kozlowski & Doherty, 1989; Kulik, Oldham & Langner, 1988). Therefore, it can be suggested that although no assertions can be made that the present study was immune to method bias there is no particular reason to consider that this could be a serious threat to its validity.

#### *Issues regarding the Validity of Measurements*

Personality was assessed with a self-report measure. It has been suggested that self-report measures of personality are less valid than personality evaluations based on observer information (John & Robins, 1994). On the other hand, a number of authors consider self-report measures as superior to observer ratings (Coyne & Gotlib, 1983; Funder, 1989). To illustrate, it is suggested that the former are based on richer information that is not usually available to observers (Funder, 1989). Furthermore, O'Reilly and Chatman (1994) found that self-report and observer-based measures of conscientiousness were significantly correlated. This suggests that self-report and observation-based personality measures give similar results. Hence, the use of a self-report personality measure does not by itself constitute a threat for the validity of the study. Finally, from a pragmatic point of view, the only method that could be used for the assessment of personality in the present work was self-report measures.

Information about provision of mentoring and reception of mentoring was based mainly on retrospective recall by the respondents. This, of course, is subject to distortion due to factors relating to selective attention, post factual justification, or simply forgetfulness. However, the retrospective procedure in the study of mentoring and career outcomes is especially prone to yield biased results in cases where samples that consist exclusively of individuals at their middle or late career stages are employed (Whitely &

Coetsier, 1993). The respondents in the study were chosen from all hierarchical levels of the organisation and they were at various career stages. 78.1% of the respondents who were included in the analysis indicated age below 45; that is they were in the first and second (or early) career stages according to Hall's (1976) career stage model. More important, 77.2% of the respondents indicated less than 10 years of tenure with the organisation. As mentoring experiences during careers in the particular organisation were considered in the present work, the possibility of memory distortion due to a long career with the organisation is limited. Furthermore, the focus was on primary mentoring which may involve none, one or very few important and all-embracing relationships during an organisational career. Retrospective data collection procedures seem to tap this type of mentoring well (Whitely & Coetsier, 1993). Nevertheless, it should be kept in mind that there may be a reciprocal relationship between mentoring and career success (subjective and objective) in the organisation. Success or failure at a particular point in time (e.g., at the time that the data were gathered) may have induced distortion of memory due to selective attention.

The factor which refers to whether the individual was currently involved in a mentoring relationship was not taken into account in the present work. It can be argued that this factor (i.e., being involved in such a relationship at the time of the study) can have affected the responses (especially reports of subjective career success). However, Kram (1988) noted that the effects of a relationship with a mentor extend long after the termination of the relationship. Therefore, inclusion of this variable, most likely as a control factor, would not considerably improve the validity of the investigation. There is empirical work which implies support for this conclusion. Chao, *et al.* (1992) investigated for differences in outcome variables (e.g., organisational socialisation, salary) between individuals who were protégés at the time of their study and individuals whose relationships with mentors had ended more than two years prior to their study. They found no differences in any of the investigated outcome variables.

A final point on the measures used in the investigation, refers to implications made by the results regarding the correspondence between the global factors of the Cattell 16PF5 and the Big-Five factors. It has been suggested or reported that Self-Control corresponds to the "conscientiousness" factor of the Big-Five (e.g., Conn, 1993;

Terpylak & Schuerger, 1994). It would be expected that conscientiousness (and the characteristics associated with it) to be positively related to work involvement. However, no relationship between work involvement and Self-Control was identified in the present investigation (correlation coefficients with range  $-.23$  (*ns*) to  $.10$  (*ns*) and median  $-.015$ ). This may have implications regarding the correspondence between the Cattell 16PF5's global factors and the Big-Five factors. The issue of the 16PF5 - Big-Five correspondence has already been considered earlier in the present work. The author had considered that the correspondence between the 16PF5's global factors and the Big-Five may not be exclusive, but it seems satisfactory. The above result implies that 16PF5's Self-Control may not be an good indicator of the Big-Five's conscientiousness factor; which raises the suggestion that correspondence between the global factors of the 16PF5 and the Big-Five factors should not be assumed with certainty. Of course, no assertion can be made on the basis of the present data. However, the issue warrants some attention, because it relates to the validity of the interpretation of the results derived by research; to the comparability of results across studies employing the 16PF5 and the measures of the Big-Five; and to the choice made by researchers regarding the instruments they use. One of the commercial arguments of the editors of the Cattell 16PF5 is that its global factors correspond to the Big-five factors. As already noted, this has been one of the reasons for using the Cattell 16PF5 in the present study.

## 8.5 SUGGESTIONS FOR FURTHER INVESTIGATION

### *Investigations using Trait-specific Moderators*

In general, it can be considered that although the expected personality traits made contribution to the models in the expected direction, that contribution was not particularly strong. It has been suggested, however, that the strength of the relationship between personality traits and other variables of interest may be enhanced if trait-specific personal moderator variables are taken into account (Bem & Allen, 1974). This, in effect, refers to Allport's (1937) suggestion regarding the existence of cardinal and secondary traits. Cardinal traits are those that are pivotal to one's personality structure and secondary traits are traits that are not pivotal to a person's personality. This is an issue

which has recently attracted research in the field of organisational psychology (e.g., Baumeister & Tice, 1988; Britt, 1993; Chaplin, 1991; Lanning, 1988; Zuckerman, Miyake, Koestner, Baldwin & Osbourne, 1991; Zuckerman, Bernieri, Koestner & Rosenthal, 1989). There is still controversy over the nature and operationalisation of trait relevance (e.g., Baumeister & Tice, 1988; Tellegen, 1988; Zuckerman, *et al.*, 1991); and there are problems with the consistency of the relevant results (Schneider & Hough, 1995). Nevertheless, the suggestion is that the relationship between measures of personality traits and behaviour outcomes would be stronger if trait relevance were taken into account. As an indication, Chaplin (1991) suggests that the average correlation between personality traits and behaviour should be incremented by .10 if the moderating effects of trait relevance are taken into account.

On a similar line to the above, Schneider and Hough (1995) suggested that not only trait specific variables, but also general variables that refer to impression management, such as self-monitoring (Snyder, 1974) or private self-consciousness (Fenigstein, Scheier & Buss, 1975), could moderate the relationship between personality traits and behavioural outcomes. As an illustration, it seems that high self-monitors are more apt, or more interested, than others in identifying the appropriate social norms and in regulating their behaviour accordingly (e.g., displaying extravert or introvert behaviour according to the situation (Deaux & Wrightsman, 1988)).

The above points suggest that the effects that were identified in this investigation represent a lower limit in terms of strength. Furthermore, these effects may actually be stronger in the present context than what they appear to be. In addition, direction for another possibility for subsequent research is given. Apart from attempts to replicate, substantiate and generalise the present findings, future research can investigate for potential moderating effects of trait-specific variables or general variables, such as self-monitoring.

#### *Research with individuals in “Boundryless” Careers*

Respondents in the present study were employed on a full-time basis in a seemingly secure environment in terms of employment. Part-time, contractual or self-employed employees were not considered. Part-time and contractual employees,

however, constitute a substantial, and probably increasing, portion of the work force, at least in the UK and the US (e.g., Ansbery, 1993; Government Statistical Service, Oct. 1995; Government Statistical Service, Dec. 1995; Government Statistical Service, Jan. 1997; Dec. 1997; Morgan, 1996; Morrow, 1993). Therefore, investigation of the factors that contribute to career success, or even to careers, when employment that conforms to these types is important. As in the case of self-employed individuals that was presented earlier, mentoring and its contribution to career success may need to be reconsidered in the case of part-time and contractual employees. The role of networking may need to be reconsidered as well. Inter-organisational networking may be of most importance for employees in short-term contracts and/or part-time employees. The notion of objective career success may also be different, at least in terms of operationalisation. This can be extended in the case of subjective career success. For instance, for employees in short-term contracts, a facet of career success may mean success in obtaining or in the probability to obtain a new contract. Advancement, close ties with colleagues and career aspirations may not be very relevant issues in that case. Furthermore, the relationship between objective and subjective career success, including the causality issue may need to be put in a new perspective.

The above suggestions are in line with a current concept in the study of careers, briefly mentioned in the first chapter, that of the “boundryless career” (Arthur, 1994). It refers to an emphasis on the notion of career outside the career principles (e.g., stability) imposed by employment in a single organisation. It places an emphasis on inter-organisational phenomena (e.g., alliance building, external labour markets) instead of intra-organisational phenomena (Arthur, 1994; DeFillippi & Arthur, 1994; Miner & Robinson, 1994). This suggestion partly stems from a global trend towards: an increase in small firm employment, because they are the large firms where the traditional consideration of organisational career is most viable (e.g., Bannock & Daly, 1990; Birch, Haggerty & Parsons, 1993; Giaoutzi, Nijkamp & Storey, 1988; Small Business Association, 1992); a decentralisation of large organisations (Dumaine, 1992); and a decrease in the time that the average employee spends in a single firm (Cheng, 1991; Maguire, 1993); and finally, notable changes in the demographics of society (e.g.,

dramatic increase in functional longevity) with individuals in the near future able to pursue two or three distinct careers in their working lifetimes (Derr, 1986).

Arthur (1994) suggests that this new proposed perspective must be considered complementary to the traditional “organisational career” perspective. Nevertheless, some assumptions made under the “traditional”, largely intra-organisationally based, career perspective (e.g., Hall, 1976; Kanter, 1977; Van Maanen, 1977; Schein, 1978) may need to be reconsidered under the “boundryless” perspective. The assumed partial contingency of subjective career success on objective career success may not hold in “boundryless” careers (Arthur, 1994). Therefore, the consideration of a causality relationship from objective to subjective career success, which has been made in the present work and in other parts of the literature (e.g., Turban & Dougherty, 1994), may need to be challenged. The notion of “boundryless career” further implies that inter-organisational networking may be of major importance for the study of career success in the future, being in line with other literature suggestions (Kanter, 1989; Rousseau & Wade-Benzoni, 1995). Therefore, it seems that quantitative research which assesses the contribution to and importance of inter-organisational networking for career success is also needed. This type of research should complement the present and future research which utilised intra-organisational networking. Furthermore, as noted earlier, the role of mentoring may also have to be reconsidered in the “new era”.

#### *Research in contexts with Formal Mentoring Systems*

No formal mentoring systems had been implemented in the organisations that were employed in the present work. There are suggestions about a qualitative difference between formal and informal mentoring relationships. Informal mentoring relationships are more likely to involve, amongst others, interpersonal attraction, complementarity of needs, motivation and willingness of both partners to be in the relationship (Chao, *et al.*, 1992). It is logical to assume that individual difference variables, like personality traits, play a more salient role in the formation, duration and success of informal mentoring relationships than they play in formally assigned mentoring relationships. Therefore, an issue which can be investigated is the potential moderating effect of formal vs. informal mentoring programmes on the relationship of personality traits (and, maybe, other

individual-level variables, such as work involvement) with mentoring and, in extension, networking. Furthermore, there is considerable variety even within formal mentoring systems. Assignment of mentors to protégés can vary from being a random procedure to procedures which involve mentor selection on the basis of careful consideration of personal information (Chao, *et al.*, 1992). This factor may mediate the relationship between mentoring and career success related variables. This issue can also be taken into account in future investigations.

*Research to identify Mediators in the Personality-Mentoring/Networking relationship*

Research can attempt to identify mechanisms through which certain personality traits affect mentoring and networking, that is mediators in the relationship between personality traits and mentoring or networking. Causal models which involve personality traits, variables referring to influence tactics, and mentoring can be developed and tested. Furthermore, intentionality, from the part of the subordinate and perceptions about the subordinate's intentionality from the part of the superior, can be incorporated as moderating factors. To illustrate, intentionality may be the differentiating factor between various types of subordinates' influence tactics and organisational citizenship behaviour, which is an index of performance (Ferris, *et al.*, 1994).

*Research on the relationship of Mentoring and Networking with other Political Tactics*

Although mentoring and networking can be considered under the framework of political tactics, other more overt political tactics seem to exist in the organisational environment (Fairholm, 1985; Kipnis, Schmidt & Wilkinson, 1980; Zanzi, *et al.*, 1991; Tharenou, 1997). For instance, Zanzi, *et al.* (1991), along with networking, identified another set of tactics labelled as "hierarchical tactics". They consisted of tactics such as blaming and attacking others, manipulation, ingratiation and intimidation. Some of the issues which can be investigated in the future include the relationship between mentoring and networking and these other political tactics; and the relationship of these political tactics with personality and career success. Investigation in this direction can lead to the

emergence of a more complete picture regarding the issue of political types of behaviours and their antecedents and consequences in the organisational environment.

#### *Extension of the investigation in different Structural Contexts*

A moderator relationship between organisational structure (organic vs. mechanistic) and the use of networking and mentoring tactics may exist (Zanzi, *et al.*, 1991). The extensiveness and use of mentoring relationships and networks must be greater in organisations with organic structures. In the present investigation no measure (e.g., Zanzi's (1987) scale of relative mechanistic-organic characteristics) was used to identify the type of organisational structure of the organisations employed, because organisational structure was controlled by means of the design of the study. However, there is every reason to consider (or, better, there is no reason to consider otherwise) that the present organisations can be described as mechanistic. As noted earlier, despite the fact that there has been being some kind of restructuring in the higher education system this type of "industry" is still relatively stable. Stability in the environment seems to be associated with mechanistic structures (e.g., Burns & Stalker, 1961). Furthermore, a number of characteristics that are assigned to mechanistic structures, such as detailed description of responsibilities and authority for each organisational level (Zanzi, 1987), were present in these organisations. Networking and mentoring should be more likely to be used and to be effective in organisations with organic structures (Zanzi, *et al.*, 1991).

The points made in the previous paragraph suggest that the present results represent lower limits in the strength of inter-relationships between variables. Situations in organic organisations are more ambiguous and less clearly defined, to employ Mischel's (1973) terms, these situations are of less strength. Hence, they must be more likely to allow for variability in personal characteristics to show in behaviour (House, 1988; Zanzi, *et al.*, 1991). Therefore, it should be expected that the identified personality traits will be more strongly related to mentoring and networking in organic organisations. Furthermore, the relationships between mentoring and networking with career success, especially objective career success, must be more prominent in organic organisations. These issues must be investigated in future research.



*Extension of the investigation in different Cultural Contexts*

Organisational culture is related to the structure of the organisation (e.g., Pheyse, 1993; Harrison, 1987). Then, organisational cultures, that are related to organic structures, such as achievement cultures (e.g., Harrison, 1987), may make the relationship of personality traits, mentoring, networking and career success more prominent. Therefore, another research suggestion refers to the investigation for moderating effects of organisational culture on the impact of personality on inter-personal relationship variables and career success.

Taking the perspective of the national culture, research on mentoring has been predominantly based on Anglo-Saxon cultures, especially samples drawn from the US. There is some research on mentoring in societies others than British and American which suggests that the findings with Anglo-Saxon samples can be generalised to other cultures (e.g., Aryee & Chay, 1994). However, even these few studies have been conducted in societies (e.g., Singapore) where organisational and business practices must have been influenced by the Anglo-Saxon culture. Of course, the situation with networking, given the relative lack of direct research even in the US and the UK, can be considered similar.

A number of distinct societal cultural types have been identified [e.g., Northern European (e.g., Germany, Sweden); Latin European (e.g., Italy, France, Brazil), East-Central European (e.g., Russia, Ukraine) (e.g., Ronen & Shenkar, 1985)]. Therefore, further research employing samples from various cultural types seems to be necessary. As a simple illustration of potential effects of culture on career-related variables, tenure plays a very important role in the allocation of organisational rewards, such as promotions, in Japan; patience is rewarded (e.g., Murayama, 1982; Ouchi, 1981). Furthermore, the notion of mentoring seems to be embedded in the Japanese society and organisational life; and notions that are related to networking, such as co-operation, group atmosphere and emphasis on human relations seem to be fundamental in Japanese organisations (e.g., Murayama, 1982). Then, mentoring and networking may be found to be less related to career outcomes in Japan, due to low variability. In essence, mentoring and networking may be structural factors in Japanese organisations. Furthermore, personality differences may play a lesser role in mentoring and networking. Or, even that,

mentoring and networking may need to be conceptualised in a different way. These issues are of both theoretical and practical interest given the globalisation of the economy.

## 8.6 SUGGESTIONS ON ORGANISATIONAL AND INDIVIDUAL TACTICS AND STRATEGIES

### *Formal vs. Informal Mentoring Systems*

A number of organisations have been introducing formal mentoring systems (e.g., Wilson & Elman, 1990). Authors recommend that mentoring must be considered part of the organisation's strategy (e.g., Aryee & Chay, 1994). Formal mentoring involves formal socialisation. Research, however, suggests that formal socialisation programmes have certain disadvantages over informal socialisation programmes. Formal socialisation programmes may reduce the ability to adapt to the organisation and may inhibit innovativeness (Baker, 1988; Jones, 1986). Furthermore, research suggests that informal mentoring relationships may be more beneficial, at least for the protégés, than relationships in the context of formalised mentoring systems; effectiveness is considered both in terms of quality and extensiveness of the functions that are provided and in terms of work outcomes (Chao, *et al.*, 1992). Therefore, recommendations that mentoring should be considered as part of the organisation's strategy should not be equated with the implementation of formal mentoring systems. Promotion of a "mentoring culture" may be a more effective, though probably more difficult to achieve, alternative. However, a colleague of the author who is involved in consultancy and has been observing the implementation of formal mentoring systems, suggested that to expect the formation of a sufficient number of informal mentoring relationships "these days" is rather utopic. He considers that the pressures that employees perceive that organisations and the economic conditions impose on them in combination with the high levels of individualism make organisational members unwilling to devote time to the development of others; unless this is one of their formal duties and, maybe, some tangible rewards are attached to it.

*“Malevolent” and “Benevolent” Mentoring and Networking*

Mentoring and networking are considered largely political behaviours, whether this is consciously recognised by the focal individual or not. It is likely that political behaviours which can promote individual interests, such as advancement in the organisational hierarchy, to be detrimental to the organisation, though the results of relevant work are not unequivocal (Luthans, 1988; Zanzi, *et al.*, 1991)

If the above speculation holds, then the implications for the understanding of issues such as organisational performance, and for the formulation of advice at both an individual and an organisational level can be important and intriguing. One of the major implications is that individuals who advance faster and, presumably, reach the highest organisational ranks may not be the most appropriate ones to control the stakes of the organisation. Derr (1986, p. 21) notes that “politics-playing careerists may not act in the company’s best interests”. One may also recall Olson and Baker’s (1983, p. 636) rejected, albeit noted, alternative conclusion referring to “the unlikely possibility that firms promote less-able individuals”. Another implication is that advice regarding action at an individual level may contrast advice regarding action at an organisational level. At an individual level the suggestion may be to approach powerful organisational members and to build effective networks, probably by means of other political behaviours (e.g., ingratiation), as means for advancing one’s career within one’s work organisation. On the other side, one may need to advise organisations to use as much as possible standardised, independent and transparent (e.g., recommendations of assessment centres) procedures in order to allocate rewards (e.g., assignment of important and challenging tasks, promotions). It is interesting, therefore, to investigate the performance of organisations where a large numbers of “fast trackers” are found in the upper echelons with the performance of organisations where career paths are relatively slow and where patience is rewarded.

Although advancement in the organisational or occupational hierarchy is a main career concern for most individuals there are other concerns as well (Hall, 1976; Schein, 1978). In particular, there seem to be individual differences in career priorities or priorities regarding the organisational life. Such priorities include contribution to the organisation, development of skills, and development of autonomy (i.e., freedom from

supervision and organisational rules and constraints) (Zanzi, *et al.*, 1991). The order in which interests and personal targets are prioritised may affect the way in and the reasons for which individuals are involved in mentoring and networking relationships. In turn, it may moderate the relationship between mentoring and networking (or other phenomena that are related to organisational politics) and career outcomes. Furthermore, there may be an interaction between personality traits and career priorities. This point relates to the point that was raised in the previous paragraph, that whether an individual's involvement in a mentoring relationship or network building benefits the organisation may partly depend on the interests and intentions (whether recognised or not) for doing so. Therefore, mentoring and networking relationships could be classified as "benevolent" or "malevolent" for the organisation on the basis of the intentions, needs, interests and priorities of the focal individual. Future research must also investigate these issues because they appear to be of great importance; although it is recognised that this would require laborious procedures for results of validity to be obtained.

#### *Gender Equality in Objective Career Success*

At an individual level, the present results suggest that women should be advised to be more assertive in bidding for promotion and that they should start appreciating the importance of relationships with others not only for their expressive value, but also for their instrumental value. Relationships with others are needed, along with work involvement and performance, for career success in objective terms to be achieved. Whether, however, such "briefing" will be beneficial or detrimental for the organisation is an issue of concern. With women starting valuing their careers more and becoming aware that work involvement and performance do not suffice, but networks and "politics" may be more effective, can lead to a situation that everyone in the organisation is primarily engaged, or trying to engage, in political behaviours and network building, neglecting work quality. Although this scenario may be pessimistic, it is not very unrealistic.

At the level of the organisation, the present investigation suggests that if there is a genuine intention from the part of the management to induce equal career opportunities between genders, and gender equality in general, then major reconsideration and

restructuring of all processes and procedures must be done. Amending some, or part, of them does not appear to be adequate. To provide an illustration in the present context, changing the procedure for promotion in a such a way as the employee is not required to apply for promotion, but consideration is automatic at the time of appraisal, would be a positive step. However, the effects that would be brought by this can be considerably strengthened if it is required that the committees which consider promotions are balanced in terms of numbers and power of the men and women who participate in them. Finally, the present results imply that the roots of inequality may be found beyond visible or surface-level processes and procedures. Therefore, although major reconsiderations of all processes and procedures are necessary, such reconsiderations and the resulting restructuring may be incomplete without tackling more deeply entrenched issues, including the culture. Simply introducing laws and changing processes and procedures seems equivalent to considering that everything in an organisation can be understood and changed by looking at and redrawing the organisational chart.

## 8.7 CONCLUSIONS

The results suggest that a causal model with the ordering: personality traits - mentoring/networking - career success (objective - subjective) is descriptive of the relationship pattern among these variables. However, mediation of the relationship between personality and career success by mentoring/networking was not found, at least in the strict statistical sense, though this was not an adamant expectation. The suggestion is that other variables, apart from the variables that were included in the present causal models, should be involved. Work involvement, a control variable in the present work, can be such a variable. Performance (including organisational citizenship behaviours) is another candidate variable. Furthermore, the uniform structure and the context in which the present work was conducted should be taken into account in the interpretation of the findings.

The causal ordering of the variables and the configuration of the causal models may be specific to the type of organisations that were employed in the present investigation. Speculatively, in organisational contexts where the immediate superior is

directly involved in promotion decisions, the effect patterns from mentoring and networking towards objective and subjective career success may be different from those identified in the present context. In addition, the presence of a formal mentoring system in the organisation is a factor that may affect the relationship pattern. Furthermore, the contribution of personality traits to the rest of the variables may be different in different structural environments. If jobs in more unstable types of the industry (e.g., the private sector of the economy) are considered, personality may be found to play a more important role in the development of relationship constellations and career success.

The contribution of provision of mentoring in career success, was not found to be as substantial as it was expected, but the associations were in the direction that was expected on the basis of intuition and research. However, there was some evidence that its effects were shadowed by the stronger effects of mentoring and networking. Nevertheless, the findings suggested that provision of mentoring contributes to the creation of a mentoring culture. Individuals who had received mentoring were more likely to provide mentoring. The present work involved only an initial investigation and the issue deserves further research. In addition, the scale for provision of mentoring that was developed in the present work, however valid it appears to be, may need to be further developed; so its scope and descriptiveness of the phenomenon will be increased.

The findings on gender differences implied that a change in the organisational demography in terms of upper levels' male/female ratios may be a necessary, but not a sufficient condition for gender differences in career success to be substantially reduced or eliminated, at least in the medium term. The same could be suggested regarding the effects of equal opportunities legislations. Changes in ratios and imposition of legislations have to be accompanied by substantial changes in organisational procedures, structures and culture. It seems that legislations should reach all structures (e.g., committee membership) and procedures that may be associated with the phenomenon or problem that the legislation is aimed at. Shifts in societal norms and structures seem also to be necessary.

The above considerations appear to be in line with the rather pessimistic conclusions reached by Schneer & Reitman (1995) on the basis of results similar in pattern to the results yielded in the present study. They noted that "if 30 years after Title

VII of the Civil Rights Act equality has not occurred, how much longer can it take?” (p. 313).

An intuitive suggestion that was made by the findings is that men who are employed in female-dominated organisations may face the same problems, in terms of relationship ties development, as the problems that females allegedly face in male-dominated organisations.

Finally, an implication of the results is that a shift towards more gender equality in objective career attainment may be accompanied by a shift in the gender difference in subjective career success. Women may start paying more attention to and worry more about their work careers, simultaneously valuing success in family life less; which may lead to reduced satisfaction with their careers.

A very important point is that the present findings were obtained in a type of organisation which did not seem to conform to the traditional male dominated pattern of organisation. Although most of the identified relationships make intuitive sense, they have to be confirmed in other more “traditional”, in terms of upper levels’ male/female ratios, organisations. For instance, both the present findings and the literature suggest that variability in personality plays a more important role when men’s career success is considered than when women’s career success is considered. Yet, the results suggest that networking was more important for women’s than for men’s career success; a finding that would be expected in a female-dominated organisation. A substantial part of the present findings suggest that the contribution of certain variables, such as certain personality factors and mentoring/networking, in career success may follow different patterns for groups that are in the organisational majority and the organisational minority. Replications and extensions of the present work have to be conducted in organisations that approach gender balance or female dominance.

The present findings may represent a lower limit in terms of variable contribution, particularly regarding the contribution of personality variables on career success, especially objective career success, and the contribution of objective career success on subjective career success. “Objective” facts (e.g., promotions) about career may weight more for individuals who pursue careers in the private sector.

Subsequent research should be directed towards further validation, substantiation and refinement of the present findings in organisations of similar nature. Investigation in organisations of a different nature (e.g., the private sector) should be the next step to that or a concurrent step. The issue of male dominance is a very important factor that should be taken into account. Given the shift away from male dominance that is suggested to be occurring, the relative importance of a number of variables for career success, objective and subjective, for each gender should be further investigated. Employment of additional variables that may be involved in the models is another point. The size of the gender gap in objective and subjective career success, the factors that account for it, and the directions (increase and decrease) towards which they are moving are issues that should continue to be investigated. The problems with the development of relationship ties that seem to be encountered by men who find themselves in female-dominated organisations and professions should be investigated as well. Given that differences in gender-related social norms still exist, these problems may be partly of different nature from the problems allegedly encountered by women in male dominated organisations. Furthermore, cross-cultural issues should be taken into consideration and research should be moving towards a more international perspective.

Use of longitudinal designs is recommended. However, longitudinal designs have inherent difficulties in their execution (e.g., time constraints, history, etc.). Employment of other methods, apart from self-report, in the collection of data is another recommendation. Use of archive data regarding career histories could increase the accuracy in the estimation of the objective career success criteria. Furthermore, it may enable the utilisation of other career-related information (e.g., lateral moves, assignment of particular tasks) that was not available in the present work. Use of other methods (e.g., others' ratings) for the measurement of mentoring, networking and provision of mentoring could provide a cross-validation of the self-report measures on these variables. Finally, refinement of the variables that were employed in the present work should be considered.



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<sup>1</sup> The term “discrimination” is “a slippery concept at best” (Shackett & Trapani, 1987, p. 520). It has been given various interpretations and definitions in the literature, encompassing a wide range of phenomena. It can refer to phenomena ranging from early socialisation to blocked access to acquisition of career enhancing skills or to direct blockage of one’s career (Cannings, 1988; Shackett & Trapani, 1987). The framework proposed by Becker (1971) is very appropriate when objective career success is considered. Becker (1971) defines discrimination as any action which violates supposed uniform rules and procedures, such as equal opportunities legislations, in expense of certain individuals or groups. Two major types of discrimination under this framework are wage discrimination (e.g., promoting men and women to the same level, but not paying them equally) (Olson & Becker, 1983) and employment discrimination (e.g., deliberately using men’s and women’s performance evaluation in an unequal way (Cannings & Montmarquette, 1991; Olson & Becker, 1983).

<sup>2</sup> The term “Extraversion” was used in the present work. However, as the reader is aware, this term and the term “Extroversion” refer to the same trait and can be used interchangeably. It should be noted that Cattell (1994) objects to the use of these terms (and the term Introversion to indicate the opposite pole of the dimension). Instead he advocates the use of the terms Exvia-Invia, on the grounds that “the words extravert-introvert have become too variable, in the dust clouds of popular jargonistic usage, to be of any value in precise scientific discussion” (Cattell, 1994, p. 8).

<sup>3</sup> If a sociological definition of the manager is followed then all the employees in grade 3 (or C) and above can be considered as “managers”. In particular, Kohn, Naoi, Schoenbach, Schooler and Slomczynski (1990) define as managers in the Anglo-Saxon society employees who are at least two hierarchical levels above the lowest level of the organisation and have less than 20% share in the ownership of the organisation.

<sup>4</sup> It is noted that the available information regarding numbers and statistics for employees was not very detailed, and probably not extremely accurate. For instance, the information for University 1 was based on an audit that was conducted in 1992. Information regarding numbers of employees by grade was not available; only information regarding numbers of employees in grades A to F and number of employees in OR grades was available. Therefore, the above numbers and percentages should be seen as approximate.

<sup>5</sup> Considering interviews with a number of personnel officers currently being conducted by the author, it seems that the process is uniform with slight variations across all “old”, “modern” and “new” (limited to former Polytechnics) UK Universities.

<sup>6</sup> Special permission to the author was granted by the publisher of the Cattell 16PF5 in the UK (NFER-NELSON) to make unlimited copies of the questionnaire booklet and the answer questionnaire sheet for research purposes.

<sup>7</sup> In fact, the editors of the Cattell 16PF5 describe low scores on B factor as indicating “fewer reasoning items correct”; and high scores as indicating “more reasoning items correct” (Russell & Karol, 1995).

<sup>8</sup> Use of the raw scores would be preferable, because of the larger variance they would provide. However, the formulas for the estimation of the scores on the global factors can only be used with the Sten scores on the primary factors.

<sup>9</sup> In the present work the term “stepwise regression” will be used under the interpretation provided by Draper and Smith (1981); that is the regression procedure which uses forward selection of variables with the possibility of elimination of predictor variables already in the equation in each step. However, the term has been employed to indicate a range of methods dedicated to the identification of the “best” regression equation.

<sup>10</sup> Application of the maximum likelihood and the generalised least squares procedures with the eigenvalues greater than one criterion yields solutions with two factors included in both of them. The

patterns of the factors are qualitatively very similar to the ones yielded with the use of the principal components technique.

<sup>11</sup> The adjusted means are estimated as the predicted least squares estimates taking the co-variates into account.

<sup>12</sup> As already noted, the “statistics” that were provided by the personnel departments of the Universities employed in the study did not allow for exact estimations of numbers and ratios at all levels. In this case, for instance, the information that was available referred to 161 women - 16 men at grade D for University 1; and 138 women - 38 men at scales 3/4 for Universities 2 and 3.

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## APPENDICES

## APPENDIX 1

The scale that assesses provision of mentoring.

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Please indicate your level of agreement or disagreement with the following statements:

In my career history in this institution there has been at least one subordinate...

	<b>not at all</b>			<b>to a great extent</b>	
1. ...to whom I have consistently given challenging assignments	1	2	3	4	5
2. ...whom I have introduced to higher level individuals	1	2	3	4	5
3. ...whom I have consistently provided emotional support	1	2	3	4	5
4. ...to whom I have given advice concerning his or her career	1	2	3	4	5
5. ...I was personally interested in his or her professional development	1	2	3	4	5
6. ...I was personally interested in his or her career	1	2	3	4	5

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APPENDIX 2

The scale that assesses networking.

Please indicate the degree of your agreement or disagreement with the following statements:

	<b>disagree completely</b>					<b>agree completely</b>
There are individuals in the organization...						
1. ...with whom I exchange information concerning what's happening in the organization.	1	2	3	4	5	
2. ...with whom I frequently talk about work related topics	1	2	3	4	5	
3. ...with whom I share emotional support, feedback and work confirmation.	1	2	3	4	5	
4. ...whom I consider as best friends and I share any kind of issue, professional or personal.	1	2	3	4	5	
5. I have a network of contacts for obtaining information about what's happening within the organization.	1	2	3	4	5	
6. I have a network of friendships in the organization which can help to further my career progression.	1	2	3	4	5	
7. I keep in touch with a number of people in the organization who are at higher levels than I am.	1	2	3	4	5	
8. I personally know a number of people who occupy important posts in the organization.	1	2	3	4	5	
9. I personally know a number of people who work in other departments of the organization.	1	2	3	4	5	
10. I personally know a great number of people in the organization.	1	2	3	4	5	

APPENDIX 3

Descriptors of the primary and global factors of the UK edition Cattell 16PF5 (Russell & Karol, 1995)

FACTOR	LOW SCORES ("LEFT MEANING")	HIGH SCORES ("RIGHT MEANING")
A Warmth	More Emotional Distance from People	Attention and warmth to others
C Emotional Stability	Reactiveness, Emotional Changeableness	Emotional Stability, Adaptability
E Dominance	Deference, Co-operativeness, Avoidance of Conflict	Dominance, Forcefulness
F Liveliness	Seriousness, Caution, Carefulness	Liveliness, Animation, Spontaneity
G Rule-Consciousness	Expedience, Non-conformism	Rule-Consciousness, Dutifulness
H Social Boldness	Shyness, Threat-Sensitivity, Timidness	Social Boldness, Venturesomeness, Thick-Skinnedness
I Sensitivity	Objectivity, Unsentimentality	Subjectivity, Sentimentality
L Vigilance	Trustfulness, Lack of Suspiciousness, Acceptance	Vigilance, Suspiciousness, Scepticism, Wariness
M Abstractness	Groundedness, Practicality, Solution-Orientedness	Abstraction, Theoreticality, Idea-Orientedness
N Privatness	Forthrightness, Straightforwardness	Privateness, Discretion, Non-Disclosure
O Apprehension	Self-Assurance, Lack of Worry	Apprehension, Self-Doubt, Worry
Q1 Openness to Change	Value For the Traditional and the Familiar	Openness to Change, Experimentation
Q2 Self-Reliance	Group-Orientedness, Affiliativeness	Self-Reliance, Individualism
Q3 Perfectionism	Tolerance of Disorder, Unexactness, Flexibility	Perfectionism, Organisation, Self-Discipline
Q4 Tension	Relaxation, Placidity, Patience	Tension, High Energy, Impatience, Drive
EXTRAVERSION	Introversion, Social Inhibition	Extraversion, Social Participation
ANXIETY	Low Anxiety, Unperturbable	High Anxiety, Perturbable
TOUGH-MINDEDNESS	Receptivity, Open-Mindedness	Tough-Mindedness, Resolution
INDEPENDENCE	Accommodation, Agreeableness, Selflessness	Independence, Persuasiveness, Wilfulness
SELF-CONTROL	Lack of Restraint, Obedience to Urges	Self-Control, Inhibition of Urges
3 Reasoning	Fewer Reasoning Items Correct	More Reasoning Items Correct

APPENDIX 4

Test-retest reliability coefficients of the global factors of the Cattell 16PF5 and Cronbach  $\alpha$  coefficients for the primary factors of the Cattell 16PF5 (Conn, 1994; Smith, 1994) [Reasoning (Factor B) is excluded].

FACTOR	TEST-RETEST (US version)		CRONBACH $\alpha$	
	two-week	two-month	UK version	US version
Extraversion	.91	.80		
Anxiety	.84	.70		
Tough-Mindedness	.87	.82		
Independence	.84	.81		
Self-Control	.87	.79		
A Warmth			.69	.69
C Emotional Stability			.73	.78
E Dominance			.68	.66
F Liveliness			.74	.72
G Rule-Consciousness			.70	.75
H Social Boldness			.87	.85
I Sensitivity			.76	.77
L Vigilance			.60	.74
M Abstractness			.71	.74
N Privatness			.72	.75
O Apprehension			.77	.78
Q1 Openness to Change			.65	.64
Q2 Self-Reliance			.75	.78
Q3 Perfectionism			.74	.71
Q4 Tension			.73	.76
MEAN	.87	.78	.72	.74

APPENDIX 5

The following sections consist of sets of statements with similar response patterns. Please indicate your level of agreement or disagreement with each statement by choosing one of the numbers on the five-point scales provided. Please respond to every statement, but do not spend much time on each. Remember there are no right or wrong answers.

*Please indicate your level of agreement or disagreement with the following statements.*

(1: disagree completely 2: disagree moderately 3: neutral 4: agree moderately 5: agree completely)

	<b>disagree completely</b>					<b>agree completely</b>
1. I receive a high income compared to my colleagues.	1	2	3	4	5	
2. I am fully backed by management in my work.	1	2	3	4	5	
3. I am respected by my colleagues.	1	2	3	4	5	
4. I am in a job which offers promotional opportunities.	1	2	3	4	5	
5. I am dedicated to my work.	1	2	3	4	5	
6. I am getting good performance evaluations.	1	2	3	4	5	
7. I am satisfied with my life overall.	1	2	3	4	5	
8. I have the confidence of my superior.	1	2	3	4	5	
9. I receive fair salary compared to my colleagues.	1	2	3	4	5	
10. I enjoy my non-work activities.	1	2	3	4	5	
11. I am earning as much as I think my work is worth.	1	2	3	4	5	
12. I am pleased with the promotions I have received so far.	1	2	3	4	5	
13. I am offered opportunities for further training by my employer.	1	2	3	4	5	
14. I am going to reach all my career goals.	1	2	3	4	5	
15. I am happy with my private life.	1	2	3	4	5	
16. I am most happy when I am at work.	1	2	3	4	5	
17. I receive positive feedback about my performance from all quarters.	1	2	3	4	5	
18. I am accepted by my colleagues.	1	2	3	4	5	
19. I am willing to learn new skills.	1	2	3	4	5	
20. I have enough responsibility on my job.	1	2	3	4	5	
21. I am in a position to do mostly work which I really like.	1	2	3	4	5	
22. I am in a job which offers me the chance to learn new skills.	1	2	3	4	5	
23. I am reaching my career goals within the time frame I set for myself.	1	2	3	4	5	

Consider your career history since you started working in this institution. Please describe the extent to which a higher-ranking individual (this need not be limited to one person) who had (or has) advanced experience and knowledge has... (not at all = 1,..., 5: to a great extent)

	<b>not at all</b>			<b>to a great extent</b>	
	1	2	3	4	5
1. ...Given or recommended you for challenging assignments that present opportunities to learn new skills?	1	2	3	4	5
2. ...Given or recommended you for assignments that required personal contact with superiors in different parts of the organization?	1	2	3	4	5
3. ...Given or recommended you for assignments that increased your contact with higher level individuals?	1	2	3	4	5
4. ...Given or recommended you for assignments that helped you meet new colleagues?	1	2	3	4	5
5. ...Helped you finish assignments/tasks or meet deadlines that otherwise would have been difficult to complete?	1	2	3	4	5
6. ...Protected you from working with other superiors or work units before you knew about their likes/dislikes, opinions or controversial topics, and the nature of the political environment?	1	2	3	4	5
7. ...Gone out of his/her way to promote your career interests?	1	2	3	4	5
8. ...Kept you informed about what is going on at higher levels in the organization or how external conditions are influencing the organization?	1	2	3	4	5
9. ...Conveyed feelings of respect for you as an individual?	1	2	3	4	5
10. ...Conveyed empathy for the concerns and feelings you have discussed with her/him?	1	2	3	4	5
11. ...Encouraged you to talk openly about anxiety and fears that detract from your work?	1	2	3	4	5
12. ...Shared personal experiences as an alternative perspective to your problems?	1	2	3	4	5
13. ...Discussed your questions or concerns regarding feelings of competence, commitment to advancement, relationships with colleagues and supervisors or work/family conflicts?	1	2	3	4	5
14. ...Shared history of his/her career with you?	1	2	3	4	5
15. ...Encouraged you to prepare for advancement?	1	2	3	4	5
16. ...Encouraged you to try new ways of behaving on the job?	1	2	3	4	5
17. ...Served as a role model?	1	2	3	4	5
18. ...Displayed attitudes and values similar to your own?	1	2	3	4	5



Please indicate your level of agreement or disagreement with the following statements:

In my career history in this institution there has been at least one subordinate...

	<b>not at all</b>			<b>to a great extent</b>	
1. ...to whom I have consistently given challenging assignments	1	2	3	4	5
2. ...whom I have introduced to higher level individuals	1	2	3	4	5
3. ...whom I have consistently provided emotional support	1	2	3	4	5
4. ...to whom I have given advice concerning his or her career	1	2	3	4	5
5. ...I was personally interested in his or her professional development	1	2	3	4	5
6. ...I was personally interested in his or her career	1	2	3	4	5

Please indicate your level of agreement or disagreement with the following statements:

	<b>disagree completely</b>			<b>agree completely</b>	
1. The major satisfactions in my life come from my work.	1	2	3	4	5
2. The most important things that happen to me involve my work.	1	2	3	4	5
3. I live, eat and breathe my job.	1	2	3	4	5
4. I am very much personally involved in my work.	1	2	3	4	5

Please indicate average hours worked per week; paid and unpaid overtime (including working from home): \_\_\_\_\_ hours per week

Please indicate the degree of your agreement or disagreement with the following statements:

	<b>disagree completely</b>			<b>agree completely</b>	
There are individuals in the organization...					
1. ...with whom I exchange information concerning what's happening in the organization.	1	2	3	4	5
2. ...with whom I frequently talk about work related topics	1	2	3	4	5
3. ...with whom I share emotional support, feedback and work confirmation.	1	2	3	4	5
4. ...whom I consider as best friends and I share any kind of issue, professional or personal.	1	2	3	4	5
5. I have a network of contacts for obtaining information about what's happening within the organization.	1	2	3	4	5

	disagree completely					agree completely
6. I have a network of friendships in the organization which can help to further my career progression.	1	2	3	4	5	
7. I keep in touch with a number of people in the organization who are at higher levels than I am.	1	2	3	4	5	
8. I personally know a number of people who occupy important posts in the organization.	1	2	3	4	5	
9. I personally know a number of people who work in other departments of the organization.	1	2	3	4	5	
10. I personally know a great number of people in the organization.	1	2	3	4	5	

---

Please provide an answer to the following questions:

Please indicate your sex:

[a]\_\_\_ Female

[b]\_\_\_ Male

Date of birth? \_\_\_\_\_

Height? ft \_\_\_ in \_\_\_ Weight? \_\_\_

Please indicate your Marital Status:

[a]\_\_\_ Single

[b]\_\_\_ Cohabiting

[c]\_\_\_ Married

Partner's occupational status:

[a]\_\_\_ No partner

[b]\_\_\_ Unemployed

[c]\_\_\_ Employed    [ ] full-time    [ ] part-time

For how much time have you been married/cohabiting? \_\_\_\_\_ Years

Number of children? \_\_\_\_\_

Please tick all the educational qualifications you hold:

[a]\_\_\_ CSE

[b]\_\_\_ O'Levels/GCSE

[c]\_\_\_ A Levels

[d]\_\_\_ Diploma (e.g. B.Tec.), please specify: \_\_\_\_\_

[e]\_\_\_ Bachelor's degree, please specify: \_\_\_\_\_

[f]\_\_\_ Postgraduate Diploma please specify: \_\_\_\_\_

[g]\_\_\_ Master's degree, please specify: \_\_\_\_\_

[h]\_\_\_ Doctoral degree, please specify: \_\_\_\_\_

Did you go to a public or a private (e.g. independent) school?

[a]\_\_\_ public

[b]\_\_\_ private

If you hold a higher degree (Bachelor's and above) please indicate the institution you received it: \_\_\_\_\_

Overall, how many years of education did you have? \_\_\_\_\_ years

Please provide an answer to the following questions:

When you were 15 years old:

What was your father's occupation: \_\_\_\_\_

What was your mother's occupation: \_\_\_\_\_

What was your father's highest educational qualification? \_\_\_\_\_

What was your mother's highest educational qualification? \_\_\_\_\_

Was the accommodation you lived in  
[a]\_\_ Owned by your family  
[b]\_\_ Rented by your family  
[c]\_\_ Other, please specify \_\_\_\_\_

Number of Bedrooms in the house  
you lived in? \_\_\_\_\_  
How many houses did your family own?  
none \_\_\_ one \_\_\_ two \_\_\_ more than two \_\_\_

How many cars were owned by the family?  
None \_\_\_ one \_\_\_ two \_\_\_  
More than two \_\_\_

When you were at the age of 15 in what  
socio-economic level would you place your family?  
[a]\_\_\_ Upper class  
[b]\_\_\_ Upper-middle class  
[c]\_\_\_ Middle class  
[d]\_\_\_ Working-middle class  
[e]\_\_\_ Working class

---

Please indicate your formal job title: \_\_\_\_\_

Banded Grade?(for instance, "1/2/3") \_\_\_\_\_

Grade Within Band (for instance, "4")? \_\_\_\_\_

Scale (if known)? \_\_\_\_\_

Please tick as appropriate:

[a]\_\_\_ Administrative

[b]\_\_\_ Clerical

[c]\_\_\_ Technical

[d]\_\_\_ Other (please specify) \_\_\_\_\_

Department? \_\_\_\_\_

Please indicate the number of employees, if any, you are responsible for:

[a] directly \_\_\_\_\_

[b] indirectly \_\_\_\_\_

When did you first join the institution as an employee? Year \_\_\_\_\_ Month (if remembered) \_\_\_\_\_

What was your  
First Banded Grade? \_\_\_\_\_

First Grade Within Band? \_\_\_\_\_

Please tick as appropriate:

[a]\_\_\_ Administrative

[b]\_\_\_ Clerical

Scale (if known)? \_\_\_\_\_

[c] \_\_\_\_\_ Technical

[d] \_\_\_\_\_ Other Please specify: \_\_\_\_\_

Department? \_\_\_\_\_

Before joining the institution as an employee did you have any work experience?

Yes \_\_\_\_\_ No \_\_\_\_\_

If "yes", please indicate how many years: \_\_\_\_\_ years

What was the highest hierarchical level you had reached?

Clerical staff \_\_\_\_\_ First level supervision \_\_\_\_\_

Junior management \_\_\_\_\_ Middle management \_\_\_\_\_

Upper/Senior Management \_\_\_\_\_ Other (please specify) \_\_\_\_\_

(Only for women) Did you have any maternity leaves in your career?

Yes \_\_\_\_\_ No \_\_\_\_\_

If "yes" please indicate for how much time did you stay out of work due to maternity leaves:

\_\_\_\_\_ years \_\_\_\_\_ months

*Thank you*

## APPENDIX 6

Eigenvalues of the principal components of the correlation matrix for the following variables: Anxiety, Extraversion, Independence, Self-Control, Tough-Mindedness, mentoring, provision of mentoring, networking, objective career success (for the purpose of multicollinearity testing).

Factor	all respondents ( <i>n</i> = 272)	all respondents at grade 5 and above ( <i>n</i> = 104)	women respondents ( <i>n</i> = 199)	women respondents grade 5 and above ( <i>n</i> = 61)	male respondents ( <i>n</i> = 73)	male respondents grade 5 and above ( <i>n</i> = 43)
1	2.777	2.626	2.484	2.984	2.170	3.356
2	1.768	1.576	1.705	1.404	1.911	1.970
3	1.202	1.175	1.130	1.160	1.538	1.545
4	.898	.914	.858	1.013	.902	.866
5	.752	.799	.758	.728	.749	.763
6	.649	.678	.617	.594	.641	.606
7	.541	.512	.564	.405	.432	.406
8	.488	.381	.484	.378	.393	.321
9	.426	.340	.400	.334	.268	.168