An Examination of a Non-Managerial Internal Labour Market in a Corporate Head Office: A Case Study

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March 1989

A Thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Arts in Sociology.

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Abstract

This thesis examines an internal labour market for clerical workers in the head office of a firm which owns or controls several retail and manufacturing companies. Using the human capital theory as well as the orthodox and radical versions of the segmented labour market theory I attempt to predict what variables affect entry level position, wages and the probability of promotion within white collar work. Differences due to sex and/or visible minority status are explained by the various theories. The results produced from linear regression and event history models raise questions as to whether this form of job ladder can be classified as either the primary or secondary labour market. Further, the findings are unable to unequivocally discount any one labour market theory. Rather, the results highlight many of the similarities in expectations among the various theories. Finally, the analysis suggests that further work should be done on the impact of lateral moves on future promotion opportunities.

Dans ce thèse, nous avons analysé les structures internes d'une organisation de travail, à savoir le personnel de bureau de la maison-mère d'une entreprise ayant plusieurs compagnies manufacturières ou de vente au détail. A partir des théories du capital humain et des versions orthodoxes et radicales des théories de la segmentation du marché du travail, nous avons tenté de trouver les facteurs contribuant à déterminer le niveau d'entrée d'un travail donné, son revenu et la probabilité d'une promotion. Les différentes théories utilisées ont permis d'expliquer certaines des différences remarqées au niveau des personnes appartenant à un sexe ou l'autre, ou à une minorité visible ou non. Les résultats obtenus à partir d'une régression linéaire et analyze de séries chronologiques (event history models), nous portent à questionner la pertinence d'une classification primaire ou secondaire de ce secteur d'activitié. Par ailleurs, les résultats obtenus ne nous permettent pas de rejeter sans équivoque les théories utilisées. Les résultats mettent plutôt en évidence pleusieur similarités partagées par ces théories. Enfin, l'analyse suggère l'intérêt d'une étude plus approfondie des mouvements latéraux sur l'attribution future des promotions.

I would like to thank Professor Blair Wheaton, Professor Tony Masi and Professor Morton Weinfeld for their time and advice; Susan Czarnocki for her time and her generosity when it came to computer money; the secretaries in the McGill Sociology Department for all their help; my parents and brother for their support; Stuart Greenfield for his friendship; Marna Shecter for always being there regardless of the time; and finally Professor Michael Smith for his time, dedication, and encouragement.

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Introduction

What determines income and, more generally, inequality? Since earned income constitutes a very significant proportion of total income (as opposed to dividends, interest, and rent: Brown,1977,p.5), the functioning of labour markets is a very important factor. Who gets what jobs, how much they get paid, and whether or not individuals get promoted, are important in understanding and determining social inequality. However, the answers one gets depend on the theory used. Sociologists have primarily concerned themselves with two broad approaches in addressing these questions - a market approach (which they have taken from economists) and a normative approach (Brown,1977; Clairmont, MacDonald & Wien, 1980,p. 293).

The market approach is best reflected in the writings of the human capital school. This school assumes that income inequality is principally determined by the operation of impersonal market forces. Individuals invest in education and training or acquire skills through on-the job training. In doing so they increase their productivity and are able to trade their greater productivity for a higher wage. In contrast, the dual labour market approach examines labour market structures that are somewhat protected from external labour market forces. According to this perspective pay and promotion are, to be sure, influenced by market forces; but they are also to some extent influenced by

a normative structure. The bulk of the first chapter is devoted to an analysis of the tenets of these alternative approaches.

Both approaches attempt to explain not only the inequality of pay and access to job opportunities in general, but also discrimination as a specific determinant of access to jobs and pay. Discrimination has been a particular preoccupation of sociologists and a major part of this thesis is concerned with the effects of sex and colour on entry level positions, wages, and promotion opportunities.

In this thesis I examine the functioning of an internal labour market for clerical workers in the head office of a public company which owns and/or controls several retail and manufacturing firms. The literature on internal labour markets has not ignored, but has somewhat neglected, white collar jobs. In my research for this thesis I have assembled and analyzed a body of quantitative data, drawn from the records of the firm in question, to establish the determinants of hiring and promotion in this particular case. Through my analysis I expect to find that some positions in this firm can be classified in the secondary sector and the remainder can be classified in the lower tier of the primary sector. This research, then, makes a small contribution to filling in our knowledge of white collar internal labour markets.

Following a review of internal labour market theories and supporting empirical studies, in chapter 2 I go on to review research on white collar work. Emphasis will be placed on factors

affecting promotion in this sector (with special attention paid to clerical work) in order to attempt to place the internal labour market discussion.

In chapter 3 I examine the methodological limitations of the existing research. Following, in chapter 4, I include a description of the firm and departments, as well as the methods for gathering my data and general hypothesis considered.

In the fifth chapter I analyze the statistical results generated from my data. Within this case study, linear regression and event history analysis are employed in order to determine what variables lead to entry level position, promotion probabilities and levels of remuneration. I discuss the extent to which the results are more or less consistent with the human capital or segmented labour market theory. Reference will be made to the available findings on white collar work discussed in chapter 2 in order to further place the internal labour market discussion within a white collar perspective.

Finally, I will conclude by trying to synthesize some of my more interesting findings to the existing theories and evidence. I will also suggest possible future avenues of research which arise out of my study.

The data used in this thesis is primarily quantitative and so I am not able to determine the motives of the owners of the company. This makes it impossible to use my data to test the 'radical' version of the segmented labour market theory, that argues that labour markets emerge as part of a divide and rule

strategy by employers. Consequently, I only briefly discuss this version of the segmented labour market theory. However, some of my results do have implications for the model of the relationship between education and job performance that is often associated with the radical version of the segmented labour market theory and I discuss the relevant theory and evidence later in this thesis.

Like most of the internal labour market studies I analyze the descriptive findings vis-a-vis the three major theories. What will become increasingly clear is that there are some commonalities between the various internal labour market theories that will prevent me from unequivocally rejecting or accepting any one of them. Further, I expect the findings to raise questions as to the validity of limiting an analysis of white collar internal labour markets to the traditional characteristics found in the primary and secondary blue collar labour markets. What I mean by this should become clear in the rest of the thesis.

Chapter 1

Labour Markets Theories and Evidence

In this chapter, I review the way in which the human capital approach, and the orthodox and radical versions of the segmented labour market approach both theoretically and empirically attempt to answer such questions as who gets what jobs, how much they get paid and whether or not individuals get promoted. Special emphasis is placed on the way in which these three schools explain the presence of discrimination which is thought to ensure that white males on average receive greater opportunities for better pay and promotion relative to women and visible minorities. Where possible, each of the three schools will be compared in order to highlight the similarities and differences between them.

Labour Market Theories

human capital school

Human capital theorists have particularly concerned themselves with the impact on pay and promotion of investment in education (Hurn,1982,p.52; Becker,1964). Specifically, Thurow (1969) limits his definition of human capital to (i) pre-labour market education in the form of schooling and (ii) on-the-job training (p.67).1 My discussion will concentrate on Thurow's definition.2

(i) education

Thurow (1975) argues that employers use the number of years of school completed as a means of predicting the potential training cost differences between individuals, for each of the job ladders an employee may start up. Employers rank employees based on the belief that, other things being equal, the higher the level achieved in school the greater the employee's trainability. Thurow claims that the educational system is a means of training individuals in how to learn. In other words, a more educated job applicant has demonstrated that he or she can show up on time, take orders, complete unpleasant tasks, and meet other organizational norms (p.88). He describes the labour market as an environment where the supply of trainable labour attempts to fill job openings. These vacant positions establish training opportunities for individuals who must learn to fill the skill requirements attached to a specific job (p.79).

There is a great deal of evidence that Thurow provides an accurate description of the recruitment and promotion process for many jobs. For example, DiPrete and Soule's (1988) examination of white collar promotion rates in the U.S. federal civil service indicate that even though education had little effect on mobility in the lowest grades, there was a strong positive association between number of years of school and promotion within the middle grades (p.33). Prandy, Stewart and Blackburn (1982), in their analysis of white collar work, found that education has a positive direct effect on early career prospects (pp.55-56;

Crompton and Jones, 1984, p.85). Rosenbaum's (1984) examination of the promotion of foremen, lower management, and non-management, within a large corporation, found that for those employees under age 35 having a B.A. increased the chances of receiving a promotion compared to those of the same age who did not possess a B.A. (p.74).

While Prandy, Stewart and Blackburn's (1982), Crompton and Jones'(1984), and Rosenbaum's (1984) studies all found that level of education contributed positively to future career advance, they also discovered that as time employed in the firm increased the effect of pre-labour market education on promotion prospects decreased. Specifically, in Prandy, Stewart and Blackburn's study the effects of education were found to be increasingly indirect the longer the members of their sample had been in the work force (pp.55-56). Crompton and Jones (1984) found that, in at least two of the three firms studied, formal and informal post-entry qualifications were more important factors leading to future promotion, relative to pre-labour market education, the longer the workers were employed (p.140). Finally, Rosenbaum (1984) found that after age 35, education had no effect on whether one received a promotion. For employees 40 years of age or older there was only a slight chance that they would receive further promotions. Rosenbaum indicates that his results suggest that employers will be more likely to invest in training and promotions for employees who have a greater number of working years remaining (p.74).

Treiman and Hartmann (1981) have raised some general questions with respect to the validity of this human capital argument. They believe that by just considering the number of years of school human capital theorists are ignoring the variability in the quality and depth of job specific skills learned in school (p.19). Polacheck (1975) argues further that viewing education as the only investment may bias measurement of the effects of education on earnings. Some evidence for this view is provided by Welch (1973) who examined two distinct census periods and found an increase in the return on education for Blacks which he attributed to the increase in government expenditures for schools attended by Blacks. He felt that the increase in funding resulted in Blacks receiving a better quality education (p.904). Smith (1979) used the quality of education argument to explain why southern born black women received lower returns to elementary and high school education in 1960 and 1970 relative to all white women and northern born black women (p.184).

It is clear that many of the human capital theorists consider level of education and/or number of years of school completed to be a crucial variable in determining future income and promotion opportunities once an individual is already established within the labour market. However, some critics have argued that the use of either of these two variables ignores such issues as the ability of individuals and the quality of education one has received. Further, as has been discussed above, the longer one is

in the work force the lesser the impact pre-labour market education has on employee's income and promotion prospects. Thus, it is imperative that I examine the impact of on-the-job training on income and future internal promotion opportunities.

(ii) on-the-job training

Mincer (1974), rather than basing his argument on the level of education completed, stresses the importance of work experience on productivity and earnings and thus advancement. He believes that post educational experience has a greater impact on promotion than schooling (p.1). Within on-the-job experience Thurow (1969) includes the following; formal and informal training programs, general knowledge of the rules, regulations and customs that lead to greater knowledge, and skills making a worker more productive (pp.68-69). Rosen (1972), in describing the on-the-job component of the human capital hypothesis, states that;

> firms sell jobs to workers. Workers demand learning opportunities and are willing to pay for them since their marketable skill or knowledge and subsequent income are increased (p.327).

Mincer's (1974) support for his claim of the importance of on-the-job training can be found in his examination of the earnings of a group of men eight years after leaving school. He found that education only accounted for about one-third of the income differences (p.xiv). He also displayed data demonstrating that there is a declining correlation between schooling and earnings as work experience accumulates (p.82). In addition, he

cites a study, completed by Tolles and Melichar in 1965, of economists, of the same age, with the same years of schooling, but with a significant variance in the number of years of work experience. The authors findings indicate that years of work experience contributed more than either years of schooling or age to the yearly salary of economists (pp.77-79; see Gordon, 1972, for a critique of Mincer's work).

Yet in his discussion of a U.S. Bureau of Labor Statistics report, which looked at 1,851 major collective agreements in the airline and railway industry and Government, Mincer concedes that for 50 percent of the workers seniority was only one of numerous factors considered in promotion (pp.80-81). It is impossible to determine from the data if it was the determinant factor. However, seniority was considered to be the only factor in determining promotion in three percent of the agreements. Of significance to my thesis is the fact that seniority played less of a role in determining promotion for white collar workers than for blue collar workers (U.S. Bureau of Labor Statistics,1970, pp.5,7). This indicates, that at least in unionized firms, there are differences in the promotion structure between sectors.

Segmented Labour Market Approach

The segmented labour market approach had a largely descriptive origin (Hodson & Kaufman,1982,pp.727-739). The descriptions of labour markets that writers in this school produced were largely designed to question the assumptions that

lay behind human capital accounts of the income determination process. As such, specific hypotheses with respect to the determinants have tended to come after institutional description. In this section I largely confine myself to the core institutional elements of the segmented labour market theory. I return to specific hypotheses a little later in this chapter.

Various authors have distinguished between primary and secondary sectors of the labour market (e.g.: Clairmont, MacDonald & Wein, 1980; Reich, Gordon & Edwards 1973, Doeringer & Piore, 1971, following work by Averitt, 1968). The primary job sector possesses characteristics that encourage stable work habits: skills are acquired on the job, wages are relatively high, and there is a fairly elaborately constructed ladder of jobs, with jobs higher on the ladder requiring more skills and involving better rewards than those lower on the ladder. Conversely, Reich, Gordon and Edwards (1973) claim that jobs in the secondary sector tend to discourage the development of stable working habits: they offer low wages and have relatively minimal job ladders and together those characteristics encourage high turnover. They suggest that secondary jobs tend to be filled by racial and ethnic minorities, as well as women and youth because employers claim that these groups possess poor employment commitment and thus are only suitable for the jobs available in this labour market (p.359-360).

Piore (1975) has argued that there is an upper and lower tier within the primary sector (p.129). There are low paying

clerical and manual jobs with high employment security and managerial and professional jobs with high wages and low employment security. It is these kinds of jobs that fall into the second tier of the primary sector whereas the first tier has high employment stability and high wages (Smith,1976,pp.5-6). The difficulty in determining where and on which job ladders certain jobs are located is even more complicated by Piore's (1975,p.129) concession that particular jobs might be on more than one job ladder (see also Clairmont, Apostle & Kreckel,1983,p.265).

orthodox version

Doeringer and Piore (1971), expanding on Doeringer's (1967) and Kerr's (1954) work, argue that an internal labour market is, "an administrative unit within which the pricing and allocation of labour is governed by a set of administrative rules and procedures (p.1)." Doeringer and Piore focus their discussion on three factors that have resulted in the existence of an internal labour market. The first is skill specificity. The employees, at the expense of the employer, are trained for their position. Since the skills learned are job specific, they tend not to be transferable beyond the present firm. Thus, in order to hire from outside the firm the company would have to invest in training. Employers aware of the nature of this specificity try to encourage these primary sector workers to remain in the firm. These employees are offered good wages, working conditions, security, and the potential for future promotion

(Piore,1970,p.55). This situation results in a great incentive for the employee to remain in the firm because were they to leave they might have to begin again at the bottom of a new job ladder. Thus, there is ultimately a reduction in training and orientation costs for the organization.

The second characteristic resulting in the existence of this promotion system is on-the-job training. Doeringer and Piore (1971) argue that on-the-job training in the blue collar sector tends to occur informally. Lower level workers partially learn the skills required for jobs higher up in the job hierarchy by being present to observe their fellow employees. Piore (1975) refers to this process as "automatic incidental learning (p.131)." Training costs are substantially reduced, relative to training an individual who entered from outside the firm. Thus, this acts as an incentive for the firm to create a job ladder. In addition, employees higher up on the job ladder are more willing to train less senior employees since they do not feel threatened. Tradition ensures that their position in the internal labour market is secure.

Finally, customs in the work place, defined as "an unwritten set of rules based largely upon past practice or precedent (Doeringer and Piore,1971,p.23)", are considered to cover every aspect of the work relationship. Customs are the core component which allows a sociologist arguing from a normative approach to stand apart from an economist arguing the potency of market forces. Doeringer and Piore (1971) point out that customs tend to

be the strongest when it comes to allocating wages and positions within the internal labour market (p.40). These formal and informal rules and procedures occur as a result of employment stability within internal labour markets which allow for continuous interaction with those internal and external to the work groups (p.23). As long as economic conditions are stable, there should be no conflict between efficiency and custom. However, if economic conditions change then customs may have to be altered in order to assure a new economic efficiency. Employers then must decide whether to attempt to change existing customs or to accept some degree of inefficiency in order to prevent conflict from occurring (p.25). The reduction in costs of turnover encourages employers to maintain the internal market structure (p.38). At the same time an employer's desire to ensure a stable labour force results in the exclusion of those workers in the secondary labour force from entering the internal labour market.

Brown (1977), offers a prime example of this school's argument by attempting to explain the existence of a pay differential between the white collar employees and blue collar employees. He, believes that, prior to the second world war, the custom of being employed as a white-collar worker ensured a sufficient degree of status to contribute to high wages, relative to blue collar workers (pp.86-87). He attributes the decline in the wage gap to efforts on the part of government, employers and unions to decrease the distinction. However, some of the benefits

unique to white collar workers remain because of the accepted customary distinction between the two sectors.

Smith (1976), in his critique of the dual labour market approach, argues that, as of yet, there has been little success in the creation of operational definitions that can be tested empirically (p.24). This is particularly true in the case of many of the skills which are learned on the job. Proponents of the institutional school openly admit that some of these skills are learned so subtly that they cannot be verbalized or recorded. In addition, institutional theorists claim that internal labour markets are developed because they ensure a more economically efficient firm. How is this measured? Doeringer and Piore (1971) argue that it can be seen in the reduction in turnover, orientation and recruiting costs. Unfortunately, this means that there must be available data indicating such costs prior to the introduction of such a system into a particular firms. In most instances, such as my case study, this data is not available. Jacoby (1984), goes one step further, when he argues (without giving any concrete evidence) that the claim that internal labour markets reduce the cost of turnover was a post hoc conclusion. In other words, he believes this reason was used by employers, after the introduction of the internal labour market, in order to ensure that employers would maintain this system (pp.57-58). Since most of these important questions cannot be answered with available data, studies supporting the institutional school

present descriptive evidence that a dual labour market exists, but show little concrete evidence of why it has occurred.

The radical version

Radical theorists accept the existence of a dual labour market. However they are in disagreement with the institutional theorists as to the reasons for the establishment of such a labour market structure. Specifically, they argue that employers developed the internal labour market to "divide-and-rule" workers (Gordon,1972,p.73; Blackburn and Mann,1979,p.30). Edwards (1975) claims employers replaced negative sanctions, such as the threat of being fired, with positive incentives such as promotions and job security because they believed it would strengthen employers control over their workers, thus ensuring a more stable work force (p.15). Further, Gordon, Edwards and Reich (1982) believe that in order to ensure the segmentation of the workers, employers attempted to define varied job titles and create new job ladders based on what capitalists claimed were firm specific skills (p.138). Gordon (1972) states that employers created the illusion of mobility by the introduction of unnecessary job ladders to distinguish like jobs (p.79; Edwards,1975,p.10). Gordon believes that employers were successful in creating an environment in which each worker's main interest was to move up the job ladder. He calls this desire to be promoted a "hierarchy fetishism (p.77)." The concern for individual self-interest means

collective worker opposition and bargaining power would be reduced.3

An example of this school's attempt to explain the existence of a specific internal labour market can be seen in Crompton and Jones' (1984) examination of the internal labour market of a large bank. They suggest that the bank's "no-poaching" approach to unemployment made skills which were considered to be general to the industry more firm specific. Thus, employees became more reliant on their employer than was necessary (p.124).

As in the above study, the few other studies representing this school tend to be qualitative in nature. Stone (1975) uses some statistics in her explanation of the development of the internal labour market in the steel industry. However, she dismisses most historical quantitative data available on the industry, because of what she perceives as the existence of methodological flaws.

The argument of this school is that the dual labour market is a result of conscious decisions by capitalists to prevent workers from developing a collective consciousness. Their proof is generally based on interviews from employers and quotes from trade and personnel journals indicating the "owners' intentions". What they fail to show is that a situation existed, prior to development of this type of labour market, which made it clear to employers that the threat of a worker's 'revolt' was real.

A Comparison of Schools

human capital school vs. segmented labour market (orthodox and radical)

(i) education

The human capital argument can be distinguished from the dual labour market approach in that the models of human capital theorists do not limit the entry of new employees into firms to the bottom rungs of the job ladders. Moreover, they use achieved status variables such as education to explain promotion rather than seniority and related contractual provisions. Education is a major determinant of labour market outcomes for many human capital theorists associated with both access to jobs and subsequent promotions.

The dual labour market school considers formal education to be relatively unimportant for labour productivity, particularly in the secondary sector and the lower tier of primary sector jobs (Smith,1976,p.10). The importance of education is reinforced by the fact that promotion within and out of the secondary sector (Gordon,1972, p.117). More specifically, dual labour market writers believe that educational attainment is considered a screening device for selecting a certain calibre of employee to enter into the bottom rungs of the primary sector (Doeringer & Piore,1971). Dual labour market writers, however, vary in the emphasis they place on the specific screening mechanism involved. The radical theorists consider educational credentials as evidence that a potential worker has been subject to

indoctrination of capitalists' values. Schools are used to reproduce the class system by encouraging students in particular social classes to seek jobs considered appropriate for their social class. Schools attended by children of lower class families are taught discipline and manners, and are encouraged to enter blue collar and low level white collar jobs. Since educational credential and social class are closely related, an employer can use the information available about an applicant to screen them into the appropriate job sector (Hurn,1985; Bowles & Gintis,1975). In the more orthodox version of the dual labour market theory it is assumed that trainability is associated with cognitive skills acquired at school.

While many human capital theorists place great emphasis on the importance of the level of education on productivity, and thus income and promotions, there are some members of the human capital school (in particular Mincer, 1974), who agree with the claim of dual labour market theory that education has little direct effect on productivity. They emphasize on-the-job training, the effects of which, however, they interpret in human capital terms.

(ii) <u>on-the-job training</u>

Human capital theorists link on-the-job training to an increase in productivity. Unlike segmented labour market writers, the human capital school does not limit the importance of on-the-job training to what is received in one firm. Rather, human

capital proponents consider on-the-job experience to accumulate over successive job experiences.

Unlike the human capital school, dual labour market theorists (of both persuasions) differentiate the effect of on-the-job training within the primary and secondary labour market. In the primary market, on-the-job training leads to higher income because of an increase in productivity and because customs within the firm dictate rewards for seniority. In the secondary market experience will not lead to increases in income because there are few opportunities for promotion and because the productivity of labour in all positions is either low, or unrelated to skills learned on the job (Gordon,1972,p.124).

While there are differences between the human capital school, and the two schools falling under the segmented labour market approach, they tend to be one of degree. All three approaches believe the more education and on-the-job training (measured in number of years of experience), the higher earnings will be. However, the dual labour market approaches limit the importance of education and on-the job experience to those working in the primary job sector. Moreover, once in the firm the institutional and radical school believe, just as some human capital theorists do (such as Mincer, 1974, as discussed previously), that education has no effect on income and future promotion.

the orthodox versus the radical version of the dual labour market theory

Writers in theses two schools agree that there exists a segmented labour market consisting of, at least, primary and secondary labour sectors. They are also in agreement as to the characteristics of the markets as well as which groups tend to be found in each. Further, these two schools believe that this form of labour market has been established to ensure that firms function profitably, as well as ensuring that primary sector workers benefit relative to the secondary sector workers.4

In addition to their different interpretations of the role of education (discussed above in the comparison of the human capital theory and the two versions of the dual labour market theory), they principally differ in their discussion of the reasons for the existence of this form of labour market. The orthodox version attributes the development of the internal labour market to the following factors: the need for companies to ensure that firm specific skills needed for a cost effective and efficient operation be maintained and passed onto coworkers; the need to ensure employee stability through the use of customary allocation of wages and promotions in order to minimize the cost of training and turnover; and the need to ensure that workers, perceived by employers as being the least risk to their investment (white males) are welcomed into the primary labour market to ensure that this system is maintained.

The radical school agrees that capitalists seek white male workers to place into the primary sector in order to ensure the

continuance of the dual labour market. However, they disagree, with orthodox proponents, as to the reasons for the creation and maintenance of this system. The segmentation of the labour market is a method, devised by capitalists, to divide workers and set them against each other. Within the primary sector, internal labour markets are established in order to differentiate homogeneous jobs so that workers can channel their energies into self advancement. Thus, under this system, it is argued employers can exploit the workers for profit.

Thus, both schools accept the descriptive view of the dual labour market approach, but differ on most of the underlying reasons for its existence.

Discrimination

According to Cain (1976) "economic discrimination exists when workers who are on average equally capable and productive, receive on average different rewards for the same job or different jobs possessing different promotional prospects, salaries and benefits (p.1232)."5 Both human capital and segmented labour market writers (of both schools) are in agreement as to the existence of discrimination. However there are some differences in their explanations of why women and Blacks receive, on average, fewer promotion opportunities and less income relative to white males.

human capital view of discrimination

Human capital theorists, in addition to considering the fact that tastes of employers, employees and coworkers may lead to discrimination (see a discussion of this argument in the section relating to the orthodox view of discrimination), examine three different forms of discrimination; all emphasizing either the ability or willingness of an individual or an organization/employer to invest in, or provide education, or on-the-job training for females and/or Blacks. Throughout much of the explanations of discrimination used by human capital theorists it is quite apparent that they do not limit their line of argument to a purely a market approach. Rather, they consider cultural and historical reasons which in some cases results in there being an overlap with the normative approach used by orthodox segmented labour market theorists.

Firstly, Osberg (1971) discusses how some individuals must rely on their parents and/or loans in order to raise enough money to go to school. If these children's parents are discriminated against at work or by financial institutions then the children may not have the finances to invest as much as they would like in human capital investments. It is argued that this form of discrimination particularly affects Blacks (p.106). The problem with examining this form of discrimination is that it occurs indirectly as a result of a prior act of discrimination. This causal relationship does not adequately take into account that

perhaps individuals may choose to invest their resource in something other than education.

Second, this school argues that educational institutions and employers, wanting to maximize their investment, tend not to favour investment in females and Blacks. In the educational field, guidance counsellors, teachers and parents encourage girls to invest in different human capital experiences relative to males. The results of societal expectations are for females, on average, to have significantly less educational credentials vis-a-vis male applicants when applying for non-traditional female occupations (p.452-453; Blau & Ferber,1986,p.261).6 Black children living in poor neighborhoods and coming, on average, from lower class families tend to be encouraged to be employed in vocational courses which call for less years of schooling relative to the number of years required for professional occupations. This argument, it is worth noting, uncharacteristically concedes that traditions, norms and customs help encourage individuals to make certain investment decisions and that decisions are not strictly based on market related criteria.

Further, human capital theory tends to converse with the orthodox version of segmented labour market theory when it claims that employers tend to be reluctant to invest in on-the-job training for females and Blacks because of their perception that these two groups tend not to have strong commitments to the work force. Employers believe that the lack of commitment results in

the employer not receiving significant returns on his or her investment (see a discussion of statistical discrimination in the section on institutional discrimination - below).

Evidence presented in support of this argument is that the returns to education are lower for blacks and women. Thus, Devereau and Rechnitzer (1980) found that of those individuals from their sample, with the same college degree, women tended to be located in low prestige clerical type employment relative to their male counterparts (p.153). Weiss (1970) found that, when age was controlled, black males received significantly lower returns to education than white males. This was true regardless of whether education was measured as years of schooling or level of education achieved (p.1368). The results clearly indicate that women and Blacks in these two studies received less of a return to their investment than their White male counterparts. However, they fail to conclusively prove that the reason for the difference is a result of the employers wanting to maximize their investment by investing more in on-the-job training of white males relative to females and Blacks.

Finally, human capital theorists (paradoxically, along lines similar to the radical school) suggest that discrimination against women may occur because societal and economic pressures for females to take care of house work and child care act as economic barriers precluding women from investing in on-the-job training (Gunderson & Riddell,1988,pp.452-453; Buckland,1985,p.145; Eichler,1983, pp.250-251). Alternatively, it

is sometimes argued (clearly not along the lines of the radical school) that women may choose voluntarily to follow their traditional role (Gunderson & Riddell,1988,p.452).

Whatever the reason for the withdrawal from the labour force, the results of the withdrawal are clear from Mincer and Polachek's (1974) examination of the relationship between family and work histories of women, and their income. Using the 1967 National Longitudinal Survey of Work Experience, they discovered that married women, with children, were found to have interrupted their labour force participation for a substantial period. Of these women only two-thirds returned after the birth of their first child, and many of these women returned to part-time work. Those who returned full-time received lower wages than never married women and substantially less than males regardless of their marital status.7 A further study, by Mincer and Ofek (1982), using the same data set as Mincer and Polachek (1974), discovered that real wages at reentry into the labour force are lower than at the time of labour force withdrawal (p.7).8 In both studies the argument is made that employers are unwilling to invest heavily in married women's "market oriented human capital (pp.S103-S104)", particularly if they have children.

The reasons given for variations in the discrimination of human capital attainment are sometimes speculative because it is often difficult to determine whether a person chooses or is forced to do something. However the numerous studies summarized by Gunderson (1985) on Canadian findings of pay inequality

between the sexes, and comparable results reported by Sawhill (1973) from American research, indicate sex differences in earnings (when controlling for quantifiable human capital characteristics such as education and on-the-job training) still exist as a result of other variables such as unionization and region (pp.229; pp.386-387).9

Orthodox segmented labour market view of discrimination

Orthodox segmented labour market theorists concern themselves with two forms of discrimination. First, there is what Piore (1970) refers to as discrimination "pure and simple", which occurs when employers choose not to employ workers because they possess certain characteristics. He argues, as do some human capital theorists, that this form of discrimination is not economically beneficial to employers because they choose to pay higher wages to particular groups without receiving additional economic compensation (p.46). The result for females, blacks and youth is that they are not hired for the primary sector.

The second form of discrimination is known as statistical discrimination (also discussed by some human capital theorists- as mentioned above in the human capital discussion regarding the commitment to work of some of the members of particular groups). Riddell (1985) defines statistical discrimination as a means by which employers' expectations of certain groups of workers are based on imperfect information. This information is obtained by employers viewing individual work habits of females, blacks and young males and then assuming that their observations can be

generalized to the entire group (p.58). Employers observations are further supported by such studies as the one produced by Barnes and Jones (1974). This study, using U.S. Bureau of Labor Statistics household studies of 1955 and 1961, indicated that the vast majority of industries experienced higher female than male quit rates (p.444).

Employers wanting to reduce costs of job turnover (including recruitment, orientation and training costs) rely on "traditionally dependable" workers for the primary sector jobs. Women, visible minorities, and young employees are limited to jobs in the secondary sector where skills are readily learned and easily replaced. Employers in the secondary sector benefit because the large supply of labour, as well as the lack of alternative employment, allows the employers to offer poor wages and working conditions. Further, employees in or destined for the primary sector benefit because the number of workers competing for the same entry jobs is decreased (Piore,1970,p.56).

Whether the decision that a particular worker is too risky an investment because the individual is a member of a visible minority group or a female is correct or not, certainly the placement of these individuals in the secondary sector exposes them to poor conditions and high layoffs which are likely to perpetuate the very qualities they were claimed to possess (p.57; Phelps,1972). It should be clear that this interpretation has a significant normative component. People are chosen for one or another kind of job because it is expected that their behaviour-

the stability of their work habits - will be influenced by their norms. In addition, their future behaviour is in turn affected by the norms developed on the job.

Since employers perceive no need to change this practice individuals employing this form of discrimination are often quick to discount the alternative views that such groups as women, tend to be, on average, just as stable as their male counterparts. Some evidence suggesting equivalent stability is provided by Basil's (1972) and Kanter's (1977) interviews with managers and employees of two large white collar firms. Their findings indicate that men leave their jobs as often as women. The difference between the two groups is that women may leave for family reasons but men leave either to seek promotions or start their own businesses (p.80; p.143). Further evidence can be found in the absenteeism rates, from a 1967 U.S. Public Health Service study, which showed an average of 5.6 days lost by women and 5.3 days by men (cited by Fox,1984,p.108).

While there are some questions as to the validity of the evidence indicating some basis for practices producing statistical discrimination, there is no reason for firms to alter their traditional ways unless the data becomes more conclusive, or there is a need to hire members of minority groups because of a shortage of white male employees or mandatory government regulations.

radical view of discrimination

Radical theorists believe that discrimination takes the form of employers attempting to single out specific groups based on characteristics such as sex and race to facilitate the process of 'divide and conquer' (Reich, Gordon, & Edwards,1973,p.360; Roemer,1979,p.695). Capitalists arbitrarily use sex and race as means of dividing the work force. The segmentation of white male workers from females and blacks ensures that they can less effectively work together against the interests of their employers (Marshall,1974,p.857; Beck, Horan & Tolbert II,1980,pp.113-114). Bonacich (1972) believes that employers use the cheaper labour (visible minorities) to replace more expensive white male labour. White males counter by attempting to keep the cheaper labour from their jobs, thus ensuring the continuance of a split labour market.10 In one of the few attempts to provide empirical support for this argument, Reich (1978), in referring to Black and White workers in the United States, tries to demonstrate that discrimination, through the use of segmentation, has resulted in a positive return only for high-income Whites. The greater the racial inequality, the less lower income Whites and Blacks are apt to be unionized (p.541). This situation ensures the perpetuation of class differentiation by preventing blacks and lower class whites from improving their accessibility to better paying jobs.

In a discussion of the segmentation of women in the labour force, Wilson (1982) claims that the fact that females are

considered by this society to be responsible for domestic work and the reproduction of labour power makes them economically dependent on their spouses. Thus, when a women is employed, she is hired to fill jobs found in the secondary labour market jobs that can more easily be combined with family care obligations (pp.38-39; Luxton,1980; Reich, Gordon & Edwards,1973,p.360).

It is important to point out that this school believes that discrimination permeates throughout the capitalist society. Thus, discrimination within the capitalist system begins long before the entry into the labour market. Wright (1978) argues that discrimination within the educational sector ensures that blacks and women receive lower credentials. Since those with lower credentials tend not to be promoted above those with higher credentials, blacks and women are concentrated in lower levels of the job hierarchy (p.1390). The existence of this form of discrimination throughout society ensures that the capitalist system is maintained.

The difficulty in evaluating this school's argument regarding discrimination is that it is predicated on the belief that capitalists consciously make decisions which result in the division of workers. It is not usually possible to truly know employers' motives. Further, one must question whether the capitalist class is capable of acting collectively. There are some fairly persuasive arguments, in terms of collective goods and free riders, suggesting that they are usually not capable of doing so (Olson,1965).

Is there discrimination in the labour force?

Finally, while all three schools operate from the belief that discrimination exists in the work place, there is a school of thought that believes that it is unlikely that the labour market itself is the major source of discrimination. Gunderson (1985), a proponent of this view, supports this argument by stating that the existence of an overall gap between female and male earnings of .60 cannot entirely be a result of employers willingness to by-pass potential profits made by replacing male workers with equally productive female workers at 60 percent of the cost (p.225; Brown,1977). In other words, there is a fairly vigorous tradition of writing asserting that the existence of the pursuit of profits within competitive markets renders any sustained discrimination wildly implausible.

Conclusion

The discussion of the criticisms of the segmented labour market highlight the difficulties I have faced within my study. My knowledge of skill requirements of most jobs, technology used in Company Z and customs are limited.11 Further, I have no access to data prior to the introduction of internal labour markets within this firm. These constraints, as mentioned above, limit my capacity to examine the interpretation of the radical school's analysis within my thesis. My lack of extensive knowledge of this firm's employment practices; skill and technological requirements, and labour-management relations prior to the

introduction of some form of internal labour market prevents me from trying to determine the motives of the owners to develop such a system. Since, I am constrained in my analysis, I am forced to limit my discussion to determining if the descriptive characteristics expected within an internal labour market appear to exist.

Prior to a discussion of the problems of the existing research, methods used within this thesis, and the analysis of my results, I have devoted the next chapter of my thesis to an overview of the literature on white collar work and more specifically clerical work. I believe that a knowledge of the nature of white collar work is important in trying to apply the dual labour market approach and the human capital approach to this sector.

1 In addition to investment in education and on-the-job training, Schultz (1971) includes direct expenditures on health and internal migration; the use of leisure time to improve skills and knowledge (p.25). In addition to the above mentioned list, Ben-Porath (1971) includes occupational choice (Benewitz & Zucker,1971).

2 While I acknowledge that Thurow is not considered to be one of the chief spokespersons for the human capital approach, I have chosen him for the clarity of his explanation of this perspective. Further, since the only three human capital measures accessible to me in my investigation were level of education, number of years of previous pertinent work experience, and number of years worked in the current firm, his explanation is very appropriate for my analysis. For additional discussions of the impact of level of education and on-the-job experience, from human capital theorists, see Schultz (1971) and Mincer (1971,1974) respectively.

3 See Hartmann (1976) for a specific discussion of the segmentation of women; Reich, Gordon, and Edwards (1973) for a brief review of the radical view of the origins of the internal labour market.

4 Some radical theorists argue that there are alternative political benefits for primary labour market workers uniting with secondary labour force workers.

5 While there are scores of definitions of discrimination, such as: Henry and Ginzberg (1985), Abella (1984), Stiglitz (1973), Becker (1957); Cain's definition is quite consistent with most definitions and thus is more than adequate for my purposes.

6 See Crispo, 1982, pp.1-2; Greenglass,1982; Trieman & Hartmann, 1981, p.53 for a discussion on gender socialization and Game and Pringle, 1983 for a discussion on the social construction of gender.

7 See Polachek (1975) for similar findings and Sandell and Shapiro (1978) for a critique of Mincer and Polachek's (1974) findings.

8 It is important to note that there was some adjustment to these women's wages after being employed for a short period.

9 See MacDonald, 1984, p.625 for the problems of measuring only income and ignoring benefits and working conditions.

10 Bonacich defines the concept of "price of labour" as referring to "labour's total cost to employers, including not only wages, but the cost of recruitment, transportation, room and board, education, health care (if the employer must bear these), and the cost of labour unrest (1972,p.549)."

11 While I do not have a comprehensive knowledge of the technology used in Company Z. I suspect the office technology is comparable to most offices. Some of the work is still manual. In addition, type writers, calculators and computers were used.

Chapter 2

White Collar Firm

Grandjeau and Taylor (1980), having reviewed the literature on clerical workers, comment on the fact that up until the mid to late 1970s little had been written on the topic (p.33). What has been written about white collar workers can be classified into five major areas. These areas include: job satisfaction (Prandy, Stewart, & Blackburn,1982; Grandjeau & Taylor,1980; Kanter,1977), white collar unionization (Armstrong & Peter,1986; Blum,1971; Blum,1964), bureaucratization, mechanization, computerization and feminization of the office (Smith,1989; Lowe,1986; Glenn & Feldberg,1979; Lockwood,1966; Mills,1965), proletarianization of white collar workers (Crompton and Jones,1984; Lockwood,1966; Mills,1965) and promotion (Osterman,1984; Crompton & Jones,1984; Seidman,1978; Tepperman,1976; Kanter,1977; Lockwood,1966).

In what follows I briefly outline the importance of white collar work and some of the occupations (those of most direct relevance to my thesis) that fall into this category, I concentrate on the following: (i) the feminization of the office (to give some explanation as to why in my sample of predominantly clerical workers, there are 89 females out of a total of 114 employees); and (ii) the specific properties of promotion within the office.

According to the 1981 Census of Canada, 61.5 percent of the Canadian labour force were employed as white collar workers and 18.2 percent in clerical and related occupations (cited in Chen &

Regan,1985, p.30)." Menzies (1981) points out that the only other sector to have employed a larger percent of the work force was industries involved in products and crafts. However, the percentage employed in the latter group has declined over the last forty years whereas the former group has increased (p.11).

Crozier (1971) believes that "there exists no satisfactory definition of the term 'white collar' employee (p.7)." Further, he concedes that often within office work one may encounter difficulty in distinguishing office workers and professionals. (p.8) However, the jobs in the departments I examined in Company Z were clearly white collar work (secretaries, clerks, supervisors-see appendix 1 for a full list of jobs) according to the Canadian Census definition.1

Feminization of White Collar Work

Mills (1965), in his classic work entitled White Collar, believes that "the white-collar girl dominates our idea of the office (p.200)". The predominance of females in clerical occupations has been further accentuated since he wrote. Menzies (1981), citing Department of Labour Women's Bureau statistics and 1980 Statistics Canada data, indicates that in 1971 a third of Canadian working women were considered to be employed in the clerical sector (p.9). There appear to be three main reasons why women are highly represented in the clerical sector: growth of corporations; technological innovations in the office; and socialization.

Fox (1984) argues that the shift from male to a female domination of clerical occupations can be attributed to the growth of corporations. The increased need to keep records and to communicate within and between various organizations meant an increased demand for clerical workers (p.101; Glenn & Feldberg,1979,pp.53-54). According to Lowe (1986) fragmentation, routinization and standardization of clerical jobs made it significantly more difficult to receive a promotion (p.110). The poor prospects of future advancement resulted in fewer males seeking such positions. Employers turned to females to fill this void. Fox(1984) states that the supply of educated women (that is, having graduated high school) had increased. Clerical positions gave women the opportunity to receive higher wages relative to their other options of factory work or sales work (pp.101-102; Davies,1983,p.286; Seidman,1978,p.81 argues that this remains true today).

Further, Fox (1984) believes that sex neutral technical innovations, such as the typewriter, allowed women to fill these new skills (p.101). Mills (1956) argues that "mechanization resulted in a much clearer distinction between the managing staff and the operating staff (p.205)." Braverman (1974) compares much of low level white collar work to blue collar factory-like work (p.335). Such occupational positions, characteristic of secondary blue collar jobs, provide another opportunity for women to be segregated, but this time in white collar related work.3

Seidman (1978) has emphasized the role of socialization in channelling women into clerical work. Firstly, since women's role in the family has traditionally been considered to be their primary responsibility, women have opted for clerical training because it was not viewed as extremely demanding training relative to most other occupations and professions. This, decision has allowed these women to devote more time to their domestic responsibilities as opposed to the furthering of their career (pp.80-81). Second, women took clerical and personal services training because they were encouraged to do so by public and high school guidance counsellors and curriculum (pp.80-81; Greenglass,1982). There was an increasing need for workers to fill this sector, because of the growth in corporations and the new technologies, and young women were available to be encouraged to fill these positions.

Factors Affecting Promotions

Lockwood's (1966), classic study of office work has laid the foundation for more current work on promotion. This work, and successive works, raise the following issues with respect to promotion: (i) loyalty to the firm; (ii) the expansion of the office; (iii) women's lack of opportunity to be promoted; (iv) women's preferences with respect to promotion (v) the degree to which internal recruitment exists; (vi) the use of merit based systems; and (vii) lateral moves.

Loyalty of white collar workers

Fox (1984) describes a clerical position, in the last half of the 1800s, as an occupation considered to be respectable. Generally, a clerk spent his working life in the same office. He was hired as an apprentice. If he was a relative or family friend of the owner he eventually moved up to a managerial position. Lockwood (1966) points out that those who did not fall into the above category remained loyal to the firm in hopes that they would be rewarded with promotions and wage increases (p.22; Fox,1984,p.101). Glenn and Feldberg (1979) believe that, regardless of the relationship of the employees and the employer, the physical proximity of the owner and clerk contributed to a "relationship which typically involved mutual loyalty and obligation" (p.64; Davies,1973,p.281). Tepperman (1976), however, indicates that today's office is usually too large to enable a clerical worker to get to know people in management (p.42; McNally,1979,p.75).

In more recent writings on loyalty of white collar work and promotion, Prandy, Stewart and Blackburn (1982) link the potential for internal mobility with the degree of loyalty an individual employee has to the firm (pp.138-139). Further, they argue that the prospects for promotion are generally greater for white collar workers relative to blue collar workers (p.115). Thus, white collar workers have more opportunities to be rewarded with promotions for being loyal to their firm. Further, Attewell (1987), in his study of the effect of automation on clerical

work, discovered that employers tried to ensure that the access to records remained confidential by trying to instill in their workers loyalty to the company (p.96). Finally, Glenn and Feldberg (1979) claim that extensive employee benefit programs found in large organizations are used to create a loyalty to the organization. They believe that firms create this impersonal form of loyalty (loyalty to the firm as opposed to a particular manager) in hopes that managers are more objective in their relationship to their subordinates (p.69).

the expansion of the office

Lockwood (1966) claims that as the office staff increased there appeared to be an increase in male employee job mobility from clerical jobs to other non-white collar occupations because the prospects for promotion had substantially decreased (pp.57-58,60).4 Lockwood supports his claim by citing a 1956 study which found that only about one third of the managers studied had risen from the clerical ranks. Many of the younger managers, relative to the older managers, were hired after having gone through management training programs (p.61).5 The implication of this finding is that as firms grew and became more bureaucratic they began to rely on management which had been formally trained to work in such an environment. Companies were less likely to rely on promotions from clerical work into management largely based on past experience on the job.

promotion of women

Lockwood (1966) argues that one must take into account the fact that a majority of women are clerical workers and they are less apt to be promoted (p.68). Crompton and Jones' (1984) findings support Lockwood's claims, by directly linking females' lack of advancement to the increased probability of males being promoted (p.31). Further evidence of women lack of mobility can be seen in Tepperman's (1976), interviews with office workers. She found that many women believed that they had to be "ten times better than a man to get a meaningful promotion (p.42)". Finally, in examining non-managerial white collar workers, Cassell, et. al. (1975) found that, when level of education and age was controlled for, women entered the firm at 1.39 grades behind their male counterparts. Since the entry level position was believed to affect future advancement, possible discrimination against women at entry into the firm could have resulted in women being at a disadvantage, relative to males. Alternatively, the fact that women may have not applied for comparable grade level positions, relative to men of the same age and level of education, may have jeopardized their future employment opportunities. While it is clear that some degree of discrimination exists it is unclear as to the reasons for this discrimination.

Seidman (1978) provides one attempt to explain some of the findings which indicate that women do not advance in the office. In her discussion of clerical workers in the New England states

she argues that women confront three "opportunity gaps" that prevent them from advancing. The first gap occurs at the entry level. Women, particularly those who are members of visible minorities, do not possess the skills required to be hired in jobs unrelated to factory or service work (p.77). More recent aggregate data from the United States, provided by Wallace, Datcher and Malveaux (1980), indicate that while the percentage of black women in white collar jobs (not including service jobs) has doubled between 1965 and 1978, white women are still one and one-half times as likely as black women to be employed in white-collar occupations. Further, those black women who were employed in white collar work were found at the bottom of the hierarchy, 75 percent of the time (pp.23-25).

Seidman (1978) claims that the second gap is the inability of women, in the entry level clerical jobs, to obtain opportunities to acquire additional skills which are needed for positions higher up in the firm (p.79).

Finally, the only positions for those women who have reached the top of the secretarial or clerical ladder (which Seidman refers to as either an executive secretary position or a supervisor position) are in job ladders not accessible to them from their current job ladders. These jobs include managerial, sales, and professional positions (pp.78-79).

Glenn and Feldberg (1979) claim that, in the firms they studied, supervisors (considered to be dead-end jobs) started at entry level clerical positions; however top-level secretaries

entered their respective firms at or near the top (p.70). Thus, at least in the firms they looked at, there were even fewer positions for clerical workers to aspire to. This is even true when employers believe secretaries are worthy of promotion. In a study cited by McNally (1979), 79 percent of bosses considered that their secretaries were worthy of promotion. Yet, only 45 percent said they would be willing to promote them to junior management positions (p.62).6

women may not want to be promoted

Lockwood (1966) partly attributes the lack of mobility of women to the unwillingness of a female employee to seek and accept a promotion (p.68). For whatever reason, women have often been found to resist promotion. It is important not only to examine the opportunity available to a group to be promoted but the desire of members of particular minority groups to receive promotions.7

Hoffmann and Reed (1981) in their investigation of the XYZ corporation found that there are instances in which women do not have the desire to be promoted. Women were found to be twice as likely as men to be satisfied with their present position. Of those women who did aspire for higher positions their goals were almost always lower than their male counterparts (pp.92-93). While this study appears to indicate that this corporation did not discriminate when it came to internal promotions, discrimination may have occurred in the hiring process. Since

there are in all companies fewer senior positions than junior positions, many firms during their process of recruiting low status employees will try to screen out individuals with high aspirations. Thus, the sample interviewed during their study may have already been biased. This is certainly possible in the light of Glenn and Feldberg's (1979) citing of a 1920s description of the reorganization of clerical work. This passage and my experience within this firm indicates that at least some managers actively sought individuals who were content to remain clerks (p.62; Mills,1965, pp.205-206).

Albrect (1978) claims that resistance to promotion is a direct result of women feeling that they are unprepared to deal with new responsibilities because they perceive themselves as being threatened or even lost in their new found position. They often do not know the rules and criteria by which they are evaluated (p.12). She believes that women may be more willing to accept promotions if they receive adequate information on all aspects of available jobs. Further, this knowledge may be what is needed to keep them in their new positions (p.17). Ells' (1973) in her study of Polaroid's affirmative action program discovered that women were unwilling to be promoted. It was felt that the lack of role models in management prevented the female employees from believing that secretarial positions were not the only possible and appropriate options available to them (p.14).

McNally (1979), through interviews with secretaries, attempt to explain why some secretaries do not seek promotions. She feels

that for some secretaries career aspirations are shaped during training, and interaction with bosses and other secretaries. Through these experiences secretaries often attempt to secure a position working for someone who is considered to be in a prominent position within their organization. Thus, some secretaries believe they receive their status from their bosses position (pp.63-64).

Kanter (1978), setting aside childcare issues and focusing on general organizational practices, argues that those characteristics which have traditionally been attributed to women are nothing more than characteristics of 'powerlessness'. She claims that so called female traits, including a reluctance to seek promotion, reflect historical differences in women's organizational location rather than sex-linked differences (p.12). Specifically, Kanter compares the characteristics of 'moving ' workers to those 'stuck' workers. Those who are in positions to move act in such a manner as to confirm their selection as one of the employees who should be considered for promotion (p.4). Such preparations include training in the skills, attitudes and physical appearance required for high rung positions. Kanter refers to this behaviour as "anticipatory socialization (p.6)".

Conversely, those individuals who are in dead-end jobs act in ways which confirm the organization's lack of attention toward them (p.4). 'Stuck' employees are much more likely to spend their time perfecting every last detail of their present job. Kanter

attributes this action to the fact that they do not perceive themselves as having the opportunity to advance up the job ladder. She believes that the 'mastery' of a particular job only reinforces the 'stuckness' and makes the worker even more indispensible in their present job (p.6). Kanter (1977), in her study of a white collar firm, discovered that aspirations among 'stuck' employees, particularly women, were not necessarily low to begin with. Rather, promotions were considered less desirable as they became less likely (p.140).

Pennings' (1970) study indicated that low level white collar workers, with poor promotion prospects place greater importance on extrinsic values such as benefits and relationships with co-workers and less on intrinsic values such as promotion. Conversely, higher level white collar workers were found to be much more interested in promotion. Thus, he concludes that an individual's advancement opportunities lead to changes in the evaluation of a situation (p.404).

Marchak's (1973) survey of white collar workers in British Columbia questioned employees about their promotion chances. Thirty-two percent of the men and 5 percent of the women expected management jobs in the future; 21 percent of the men and 30 percent of the women thought they had little or no chance of promotion.8 When management was asked about the likelihood of these same employees receiving promotions they indicated that 6 percent of the men and 21 percent of the women were unlikely to receive a promotion. However, 43 percent of the men and 26

percent of the women were considered to have the potential "to go to the very top." Further, the managers also noted that the year previous to the study 45 percent of the men and 60 percent of the women experienced no promotions (p.140). The implication of this survey is that, in those firms studied, women were generally fairly accurate as to their promotion chances. As well, women were on average less likely to be promoted into management from lower level white collar positions vis-a-vis their male counterparts.

internal recruitment

The following three studies are examples of the handful of studies which have tried to link the structure of white collar work with traditional internal labour market theories.

Carter and Carter (1985) examined the history of two different offices, prior to World War I, in order to establish whether internal labour markets existed at this time. One office had routinized and standardized most of its required duties. In this particular case, the firm had primarily employed women within their office. They had attributed the existence of an internal labour market to the willingness of these female employees to work for lower wages, relative to the employees in the other firm. In return for working for lower wages these women were given the assurance of a greater tenure in their firm relative to the female employees in the firm with the higher wages. The authors point out that this technique (of a 'short

term labour market') was only effective because these employees were women and they were willing to leave the labour force after three to eight years. Thus, under these circumstances it was possible to have short job ladders which possessed some characteristics one would expect in an internal labour market. Had the employees been predominantly males, this employment method would not have been successful. In the second firm, male employees were found to be involved in promotion ladders, leading to management positions, because firm specific techniques required them to remain in the firm (p.596).9 In the case of the second firm, Carter and Carter, use the orthodox segmented labour market argument that firm specific skills resulted in an internal labour market in order to link white collar work to the traditional blue collar sector argument.

Crompton and Jones (1984), in their study of white collar workers in a large bureaucratic firm, found that a considerable amount of emphasis was placed on post-entry qualifications, as well as previous pertinent job experience prior to entering this firm (p.84). The importance of this finding was that, contrary to the expectations of the dual labour market theorists, external experience was important in future promotion. However, this finding is consistent with the human capital theory.

Osterman (1984), has attempted to describe three different types of internal labour market subsystem within the white collar sector - clerical employees, low level managers, sales workers and programmers. He classified clerical work as a 'secondary'

subsystem. Within this category, there tend to be few promotional possibilities within and between firms. However, there is considerable intrafirm advancement at the bottom of the job ladder. Most of the jobs are generally dead-end and offer poor pay. Unlike the secondary market in blue collar sector, however, Osterman claims that not all jobs in this secondary subsystem demand minimal skills. Rather, some skills which are learned outside the firm are applicable to duties within the firm. But similar to the secondary labour market, workers are considered to possess low commitment and thus firms are willing to invest in only minimal training (pp.168-171). The implication of this study is that the potential for promotion for clerical workers, which Lockwood (1966) wrote about, may be a rare occurrence. Further, white collar workers increasingly appear to acquire many of the characteristics associated with the secondary labour market in the blue collar sector.

promotion and performance appraisals

The development within large firms of a bureaucratic organization has meant that positions, amount of skills, responsibility and the knowledge of job hierarchies are clearly defined. Promotion tends to be formalized based on seniority and/or merit based systems (Lockwood,1966,p.86). One means of quantifying merit has been through the use of performance appraisals.

While there is a great deal written on performance appraisals in personnel and human resource manuals (Miner & Miner,1973; French,1964), to my knowledge very little has been written on this topic and its specific relationship to white collar work. Moreover, there has been little empirical examination of the effect of performance appraisal rating on future promotion within white collar work.

Tiffen and McCormick (1962) describe a performance appraisal as being a "systematic evaluation of an employee by a qualified person familiar with the employee's performance on the job (p.4)." McGregor (1978) claims this permanent record provides a basis on which to back up salary increases and transfers (demotion, lateral or promotion) and terminations (p.19; Pigors & Myers, 1965,pp.407-408). While Tiffen and McCormick (1962) believe that the performance appraisal is an important tool in helping superiors decide on whether to promote an individual, they argue that it must be remembered that it is mostly a reflection of an individual's performance within his or her present job.

The type of performance appraisal used in the firm investigated in this thesis is known as the "graphic rating scale" (Gruenfeld, 1981, p.7). (see appendix 2) Gruenfeld claims this is the most popular performance appraisal technique. In Company Z a supervisor is asked to check a scale based on degrees of performance that best indicate an employee's accomplishments and abilities in specific areas related to an employee's present

position, as witnessed by the supervisor. Yet in the case of the graphic rating scale, there is one particular question which asks the supervisor to rate an employee's "ability to learn new duties." I would think that this type of information would directly aid in the decision as to future promotion.

A chapter written by the training department at the Hawthorne Works of the Western Electric Company (1962) emphasizes the fact that there exists a "zone of uncertainty" for those who rank very close to each other in the performance appraisal. Since these are subjecti·e indicators one would not expect an individual with a slightly higher score to have a significantly greater chance for promotion. Further, if different supervisors rate an individual the same it may mean different things. However, if there is a substantial difference one would expect a promotion to be more likely to occur for one person compared to the other (pp.22-23).

In Gruenfeld's (1981) survey of firms she found that promotions were determined by several techniques, some of which I am aware are used in the company I investigated, including personality tests and supervisor recommendations (p.26). Dale (1962) found, that in one industrial company studied, male clerks' prospects for promotion were partially based on annual merit-rating reports (p.68). Grinker, Cooke and Kirsch's (1970) case study of an insurance firm found that while seniority had traditionally been used to determine the promotion of individuals, "too many unqualified people were being promoted and

it also encouraged a lack of initiative among employees (p.232)." Thus, more emphasis was placed on performance appraisals for salary and promotion decisions (p.232).

lateral moves

Recently those interested in promotion within white collar work have begun to examine the impact of lateral moves on promotion opportunities. Gruenfeld (1975), having completed a brief review of available research on promotion believes that lateral moves are often a prerequisite for promotion (p.25). Rosenbaum (1979), in considering the importance of lateral moves for future career opportunities, suggests "in the larger context of a person's entire career a lateral move may sometimes be more valuable than a promotion (p.74)." Rosenbaum discovered, in his study of a large corporation (approximately 13,000 employees), that the firm tended to require that an employee experience at least one to two lateral moves prior to a promotion to the next level. The rationale given for job changes across levels was that experience in each additional job results in an increased breadth of knowledge of the firm (p.73). Many of the respondents felt that those women who did not have the same amount and quality of experience, compared to those individuals who have gone through the expected career path, may experience a disadvantage in moving to advanced levels (p.73). At the time of Rosenbaum's research it was still too early to answer the above question. Yet, Rosenbaum does point out that departments may vary in terms of the way in

which they perceive lateral moves as being an important indicator of experience (p.76). Thus, this occurrence was not expected, by him to be a universal one.

In further research supporting the importance of lateral moves for future opportunities for promotion, Crompton and Jones (1984) found that at the bank they examined no employee moved up without experiencing at least three to five branch moves of which many appeared to be of a lateral nature (p.82). Wellbank, Hall, Morgan and Hamner (1978), in their discussion of ways to plan for job progression in order to achieve effective career strategies, suggest that the use of lateral moves can be an appropriate approach. This is particularly the case if the firm is growing at a slow pace or if the firm is not growing at all (p.58).

Alternatively, there have been some individuals who have written on the lack of importance of lateral moves for future career prospects. Wellbank et al. believe that the frequently negative perception of lateral moves is a direct result of the actual way in which firms use this tactic. They claim that most organizations reassign their employees to similar jobs with no compensating benefits in the job itself (p.58). Glenn and Feldberg (1979) describe how horizontal moves are one way to deal with clerical workers who have reached a dead-end in their present job ladder. Workers reluctantly accept their fate because they believe that they will have to start over at the bottom of the job ladder of another firm (p.63). Stone (1975) examines the origins of the internal labour market within the U.S. steel

industry. Arguing from a radical perspective, she asserts that the development of this hierarchy is a response to the increased simplicity and homogeneity of jobs. The promotion ladder is meant to act as an incentive to motivate the workers. In actual fact there is very little differentiation between jobs. If Stone is correct one would expect that an increase in lateral moves should have no bearing on the probability of increased productivity or promotions.

It is clear that there still remains some uncertainty about the effect of lateral moves on promotion probabilities. This area being a relatively new one must be investigated further. The topic is particularly relevant because of the impact affirmative action has on the promotion of females and visible minorities. If these two groups are receiving promotions in order to enhance their representation in the upper tier of 'primary' job ladders, there is the possibility that early promotions will mean that they will end up in dead-end positions because they do not have the breadth of knowledge, acquired by having worked at several jobs at the same level.

Conclusion

The information available on white collar workers indicates that there are several areas that overlap with issues raised in the discussion of internal labour markets in the previous chapter. The fact that loyalty is an important component in white collar work, as a means of maintaining stability, indicates that

employers attempt to devise a mechanism within the employment structure to keep the employee satisfied so he or she will remain in the firm. Thus, the increase in the number of years one remains in the firm can contribute to an increase in the probability of receiving a promotion. This assumes that one of the methods for keeping the employee content is to offer promotions, as opposed to increased benefits (though the two things are not mutually exclusive).

Second, since the majority of clerical workers are women, the concept of discrimination is important to investigate. The literature on white collar workers has recorded numerous examples of discrimination. Many of these events can be explained with either the human capital or segmented labour market theories (of either sort). Some researchers investigating white collar work have tried to address many of the same questions asked by the human capital school. Unlike, the segmented labour market theories, human capital theorists explicitly include in their analysis the possibility that an alternative to the discrimination argument exists. This alternative explanation considers the possibility that females may voluntarily choose not to be promoted.

Third, the few studies that have been done on internal labour markets for white collar workers tend to be inconclusive. This may be partially due to the fact that all studies consisted of a small number of firms. Thus, just as in my study, it is difficult to generalize the findings to all white collar firms.

Further, these studies have not adequately placed white collar work (and clerical work in particular) within a clear and appropriate labour market classification. In later writings by Piore (1975), as discussed in Chapter one, he revises his description of the primary and secondary markets to include an upper and lower tier within the primary sector. He characterizes the lower tier as having work rules and formal administrative procedures (unlike the upper tier of the primary sector or the secondary sector). In addition, the lower tier of the primary sector has a pattern of mobility and turnover similar to the secondary sector, however there is some room for advancement as well as a greater degree of employment stability. Finally, relative to the upper tier employees, the lower tier employees receive lower wages (pp.126-127). Certainly much of the clerical literature described in this chapter suggests that this form of work fits within the lower tier classification.

Osterman (1984), as discussed above, tries to develop his own classification for some types of clerical jobs (such as mail room staff and messengers). His 'secondary subsystem' possesses several of the characteristics Piore (1975) has used to describe the lower tier of the primary labour market.10 However, Osterman (1984) is not clear as to exactly which clerical jobs are subject to his classification. Further, he does not attempt to synthesize his findings with Piore's theory. It is clear from the description of white collar work that while some of this work should be classified as secondary sector work (as Doeringer and

Piore claim, 1971), many of jobs considered to be clerical in nature can be classified in the lower tier of the primary sector. Few studies have tried to tie Piore's discussion of the lower tier primary sector to white collar work, and clerical work in particular. Where possible I will attempt to make this link.

Fourth, performance appraisals are said to be important in the determination of promotions within a firm. If this is found to be true then this would indicate that the argument made by the human capital school, about productivity leading to increases in wages and advancement in all jobs, has some merit.

Finally, it will be interesting to see the effect of lateral moves on promotion. If the radical school is correct in claiming that there are no great differences between tasks there should be no significant variation in the number of promotions between employees who experienced different numbers of lateral moves.

Having reviewed the three schools dealing with promotion in the blue collar sector and the research conducted on white collar workers I now intend to highlight the methodological problems which exist in the literature on both internal labour markets and white collar work.

1 See Dominion Bureau of Statistics, 1971, p.49 for a complete listing of clerical work and p.28 for a listing of occupations related to management and administrative duties. Oppenheimer (1985) includes all these occupations in her definition of white collar work.

2 See Oppenheimer (1985) for similar findings in the United States; Crozier (1971,p.16), for comparable findings in France; and Lockwood (1966,pp.122-123), for data from England.

3 See Lowe (1986) for an historical discussion of the feminization of clerical occupations in Canada.

4 This was particularly true by the 1940s.

5 It is important to note that the studies data was taken solely from 'large firms' and not from small ones. In firms which employed smaller numbers of employees the results may have been different.

6 Similar findings can be seen in Schwartz's (1971) survey of management (p.71).

7 Parnes (1954) in his discussion of mobility between firms makes the same argument (pp.15-16).

8 See Crompton and Jones (1984) for comparable findings (pp.152-153) and Prandy, Stewart & Blackburn (1982), discuss the problems between realistic expectations and reality (p.81).

9 Lockwood found a similar link between firm-specific skills and promotion in small white collar offices (1966,p.82).

10 Osterman (1984) argues that jobs within 'secondary subsystem' allow for few advancement opportunities within or between firms. These jobs can offer low pay and require low skill (but he claims not always). The skills required for these jobs can be learned rapidly, however he clarifies this point by suggesting that rapid learning does not only mean low skill. He acknowledges that some general skills can be brought into the firm and thus not all skills are firm specific. Finally, he argues that there exists a large supply of workers willing and able to fill any vacant position (pp.167-169).

Chapter 3

The State of Existing Research

There are four major problems with the state of existing research: (i) internal labour market evidence has been limited, for the most part, to survey and aggregate data; (ii) internal labour market research has virtually ignored the white collar sector; (iii) most studies of discrimination have not attempted to use organizational records; (iv) Canadian research on labour market inequalities and the literature on white collar workers (with a few exception) have ignored visible minorities.

methodological limitations

The existing research tends to be based on two forms of data; survey and aggregate data. In Denzin's (1970) view, there are four major problems with survey data. First, since each organization has it's own language, the interviewer must understand what is being communicated or he or she will misinterpret the information (p.130; Cannell & Kahn,1953,pp.343-344). Second, Denzin claims that those people who are interviewed do not always tell people what they want to know (p.130). Parnes (1954) reviews several studies in which employees lied when they were asked about how much they earned (pp.51-52; Prandy, Stewart & Blackburn,1982, consider this point in their analysis of their data,p.60). Further, employees may not be candid on satisfaction type questions if they fear that their superiors may have access

to their responses. Finally, while organizations often have their own rules and symbols, individuals, depending on their position within the hierarchy, may perceive them in different ways. Thus, the interviewer may gain a distorted picture of the group's view of the organization if they do not sample all individuals (Denzin,1970,p.131).

Wolfenden (1954) discusses the problems with the methods used to gather and code census data (p.32). In addition, there are problems which arise out of using two different censuses if there is a change in the operationalization of a particular variable (p.32). Hartman and Hedblom (1979) state that one of the major difficulties with census data is that its infrequency makes it difficult for the observer to detect shifts of fluctuations in economic or societal behavioural changes (p.203).

A majority of research using large samples comes from a sample of census data or from large survey data developed for research institutions or government. Yates (1960) suggests that sample data possess random sampling errors because they are not representative of the entire population (p.9). Further, he claims that even when results indicate that there exists a definite causal relationship, "deductions as to the magnitude of the effects of given factors can never be made with certainty from survey data (p.131)."

White collar work sector

According to Osterman (1984), little study has been done on internal labour markets within the white collar sector. Osterman attributes this neglect to what he refers to as "the enormous heterogeneity of white collar employment (p.164)." What work has been done has concentrated on primarily the banking industry and/or insurance companies (Egan, Nowak & Crockett; Grinker, Cooke, & Kirsch,1970; Crompton & Jones,1984). These firms tend to employ 300 or more workers.

To my knowledge there have been four studies which have examined internal labour markets involving clerical workers (in a non-bank, non-insurance, and non-public sector - DiPrete & Soule,1988) within private sector firms. Both Osterman's (1984), and Crompton and Jones' (1984) study rely solely on data gathered by interviews with employees and managers. Thus, these two studies base their analysis on somewhat subjective data. The two remaining studies take a quantitative approach by examining employee files. The first, Carter and Carter's (1985) study, focuses on the historical origins of two internal labour markets within the retail industry and within its supporting clerical staff. In the second, Cassell, Director and Doctors (1975) focus much of their analysis on blue collar workers and make only some reference to white collar employees. Further, the fact that both unionized blue collar workers and non-unionized white collar workers were employed by the same company may have affected the arrangement of the internal labour market.

What is clear, according to Kanter (1979), is that workers within many white collar organizations tend to lack knowledge and understanding of their own internal job ladders (p.56). She cites an example of a typical hierarchy within a specific function of an organization - Billing Clerk I, Billing Clerk II and Billing Clerk III. She proceeds to argue that while the hierarchy indicates the relative status for that particular function it does not necessarily reflect the path by which individuals move (p.57). Further, she states that the number of rungs within a particular job ladder may not be comparable across functions and positions (p.57). Certainly, this would imply that depending on the decentralization of departments one would expect differences in career paths between departments. Finally, Kanter's findings make it clear that more work must be done in understanding white collar job ladders.

limitations of research on discrimination

There are five major methods used to determine the existence of discrimination in the work place. One is the use of aggregate data or census data to determine if percentages of any one group represented within the general population are found in equal percentages within various job sectors, job levels and occupations. The argument made is that if the percentages are not equal, discrimination must occur. The problem with using this technique is that there is a built-in assumption that each group has the same percentage of members, relative to other groups, who

possess the desire for the same career path. This may not be necessarily so (Knopff,1986; see the discussion above for some of the methodological problems using this type of data).

A second means for determining the existence of discrimination is through interviews either to establish whether a group has experienced discrimination or whether a group has discriminated against another group. The problem with this method occurs when the questions are asked in different ways. In addition, there is some evidence of inconsistency between attitudes and behaviour. Muszynski and Reitz (1982) found that 72 percent of the West Indians and 24 percent of the Chinese perceived discrimination in employment to be a very and somewhat serious problem confronting their group. However, when the same groups were asked if they had personally experienced discrimination in trying to get a job only 28 percent of West Indians and 29 percent of Chinese responded that they had (pp.31-32). Breton (1981), in interviews conducted on various ethnic groups and the "Majority Canadian group", found that some groups, such as the Chinese, West Indians, Pakistani, and Canadian Indians were less likely to perceive the existence of discrimination against them when compared to the majority Canadian group's perceptions of discrimination against these visible minority groups (p.14).

There have been numerous studies to determine whether individuals were prejudiced and thus willing to discriminate (Henry, 1986; Allport,1955; Kutner, Wilkins & Yarrow,1952;

LaPierre's 1934 study-cited by Watson,1966). Most of these studies point out that there is not always a consistency between attitudes and behaviours. In other words, even though a majority of respondents refused to interact with various racial groups when they were placed in such a situation, they did.

A further method employs a control group and an experimental group to determine if discrimination exists. (An example includes Henry and Frances's 1985 study-mentioned below.) Such studies find clear evidence of discrimination. But only a small number of research experiments of this kind have been conducted and the number of cases in each study is usually quite small because of the cost of the method.

A fourth method of measuring discrimination is by examining legitimate complaints made to Human Rights Commissions (Weinfeld, 1985,p.33). The problem with using the information provided by the Commission is that no one is able to determine the actual number of individuals experiencing discrimination in any one year. People who are afraid of bureaucratic agencies, and people who are misinformed or uninformed as to the function of this commission are not likely to file a complaint.

Finally, examining organizational files is another alternative in determining the existence of discrimination. On its own this method does not provide information on the thought process of those individuals who have had to decide on who would be hired, and receive a promotion and salary increase. However, if the data is up to date, it allows the researcher to determine

who gets hired, what position they get hired into, who gets promoted, and what salary increases they get. The major problem with this method is that it is very difficult to obtain access to employee files of private sector firms. Cassell, Director and Doctors'(1975), to my knowledge, is one of the only North American studies to have examined discrimination within the private sector (not including banks) in this manner.1 I have used this method in my study, since I have had the good fortune to have access to employee files within a private sector company with predominantly white collar employment. Unlike, the Cassell, et. al. study, my firm did not have a blue collar unionized internal labour market in any way associated with it.

visible minorities

While there has been a great deal of research conducted on ethnic minorities in Canada (Gardner & Kalin,1981; Breton & Roseborough,1971; Porter,1965), Buckland (1985) questions whether information is missed by combining visible minorities with other ethnic groups (pp.148-149). More specifically, Henry and Ginzberg (1985) argue that little research has been done in the area of discrimination against visible minorities in the Canadian work place (p.5.) They also believe that the little research that has been done in this area has been limited primarily to Census data which does not have information on race. Thus, these studies have relied on information on ethnicity (p.10) or country of origin.

The few Canadian studies that have been conducted, through interviews and experiments, have found that visible minorities are less likely to be treated well at an interview, less likely to be hired, (Henry & Ginzberg,1985)2; less likely to be promoted into management positions (Billingsley & Muszynski,1985,p.105) and that they are less likely to earn high wages than white males (Reitz, Calzavara & Dasko,1981,p.24). Unfortunately, little is known about the specific effect of being a visible minority on hiring prospects, promotion opportunities and salary increases in low level white collar jobs in Canada.

One would expect the findings to be consistent with general research on the opportunities for visible minorities relative to their white counterparts. Census data indicate that, on average, white males have greater opportunities than non-white males; that, on average, non-white males have greater labour force opportunities relative to all women; and that white females, on average, experience greater labour force opportunities relative to non-white females (Ontario Women's Directorate,1986; Estable,1986; Seydegart & Spears,1985; Boyd,1984).

this study

The purpose of this case study is to partially address these four weaknesses in the literature. The human capital and segmented labour market theories will be empirically examined with data gathered from employment files of white collar employees who work in a private sector firm. I study promotion

through the use of information on job grades provided to me by Company Z. This job grade system has been specifically developed for the jobs in this firm. Further, not only do I examine sex differences in promotion, but I also examine differences between Whites and non-Whites. The next chapter includes a brief description of my firm, the methods used within this study and the major hypotheses I consider in chapter 5.

1 Some interviews were also conducted, but the majority of the study and analysis relied on the data from the employee files.

2 There research design is based on a similar study conducted by Jowell & Prescott-Clarke (1970) in England on white collar workers.

Chapter 4

A Brief Description of the Firm, Methods Used and Hypotheses

The Firm

Company Z, a public company, owns or controls several retail chains and manufacturing firms in Canada and the United States. The study was conducted in the head office and included the following departments: corporate control, purchasing, and real estate.

Corporate control is responsible for finance and accounting functions for the firm. The accounting functions include the preparation of financial statements, quarterly and annual reports and financial analysis. In addition this department is involved in numerous payroll activities, accounts payable, transactions between banks and other financial institutions and the firm, internal audits, and credit information. The purchasing department buys supply items for many of its retail divisions, head office departments, and some of its manufacturing companies. The real estate department locates store and negotiates leases for the head office and its retail divisions. This department is responsible for the administration of real estate owned by the company. Further, it is involved in the construction co-ordination for new store openings and renovations and for purchasing and administering general insurance for the company.

Reasons for Choosing Company Z

Having reviewed the literature on internal labour markets and the literature on white collar work I realized that more research was needed in order to incorporate internal labour market theory within a white collar framework. Having worked in this firm I was aware of the company's policy of first posting vacant jobs internally, prior to seeking external applicants. Thus, just as Gruenfeld (1975) argues, I was expecting that under ideal conditions this system would lead to an internal labour market (p.30).

Mills (1985) describes posting as;

> a kind of free-market mechanism because it relies on the initiative of individuals to apply for vacant positions, rather than giving management complete discretion to select candidates for promotion or transfer (p.422).

Gruenfeld (1975) believes that some employers, such as visible minorities and women, are reluctant to apply and therefore self select themselves out of the running (p.31). Alternatively, having conducted interviews with managers of large corporations in various sectors, Mills (1985) found that posting can often favour senior employees (senior with respect to number of years in the firm), while at the same time giving all employees a sense that they have an opportunity for promotion. Senior workers are favoured because they are often considered to be more qualified than junior workers. In addition, managers did not want there to be hostility within the firm for having passed over a senior employee in favour of a more junior one. As in the self selection

style of posting, he found that this practice most often negatively affected women and ethnic minorities because they tended to have been in the firm for less years than white males (p.422). Regardless of the manner in which promotions through posting are carried out I would expect, under this system, some degree of internal promotion favouring white males. Most likely, in the form characteristic of job ladders found in the lower tier of the primary labour market. Having been given access to employee files I felt I was in a somewhat unique situation in which to test internal labour market theories.

Methods

How Data was Collected

During the summer of 1987 I was given permission to gather information from the corporate division of company Z. Information was collected on employees from four departments. The departments included corporate control, real estate, purchasing and maintenance. However, since only 20 of the sample of 145 were considered to be blue collar workers and the focus of this thesis is on white collar workers, I decided to excluded from the analysis the blue collar workers, all of whom were employed in the maintenance department. Thus, the data are limited to those white collar employees in company Z who worked in the corporate control, real estate and purchasing departments. Further, an additional limit was placed on the original sample, that being that the employees under investigation were either considered by

the firm to be permanent fulltime or temporary fulltime workers at the time they were first hired. This was done because the number of non-fulltime workers was too small to use full or part time status as an independent variable. Thus, I tried to eliminate the impact of this variable on the final results. The number of workers from the original sample considered to have satisfied the two conditions of being a fulltime worker and a white collar worker was 114.

I gathered data with two different statistical methods in mind. I looked at all employees who were working as of January 1 1987 and followed them back in time until January 1 1981. I then looked at those employees who were not included in the first group, yet who were employed January 1 1982 and followed them until they left the four departments studied. Information per year was based on the status of the employee as of January 1 of the year in question. The two methods used were regression and event history analysis. (These methods and the findings will be discussed in the next chapter.)

Within Company Z there existed two payrolls, the first was for upper level management and the second was for other workers including middle management (of which there were very few) as well as lower level supervisors, clerks, and secretaries. The data source was the personnel records of the latter group. Supplementing this data was information gathered from having been employed in this firm for a three month duration and from

interviews conducted with some members of the human resources department.

The data collected from the personnel records consisted of information from four different sources. An individual's demographic characteristics and job history were extracted from the initial application and interview form which was completed in part by the job applicant and the remainder by the personnel employee who conducted the initial face-to-face interview.

Updated information during the time of employment was limited to the employee amendment files which were completed in triplicate by the employee's supervisor. One of the copies was placed in the employee's file. The changes which were recorded in the employee's amendment form consisted of one of the following: notice of increase in salaries accompanied by the reason for the raise; if the job that the individual had been employed in had been reclassified; whether the employee had been shifted to another job-vertically (up or down) or horizontally; whether the employee had been transferred to another department; whether the employee had changed residence; and whether the employee had taken a leave of absence. Many of the employees indicated whether they had children when they were hired. It was only in the case of female employees that an updated account was recorded. This was possible because of the fact that women who were pregnant requested maternity leave and such requests were noted in the employee amendment.

The information as to whether an individual was married or not, during each year of employment in this company, was verified from information obtained from employee benefit cards. Benefits were available to all employees in the firm. The plan covered both spouses and dependent children.

Information regarding employee performance was extracted from performance appraisals. These appraisals were filled out by the employee's supervisor. While 222 variables were created in the initial phase of data collection not all variables were used in the analysis completed for this thesis (see Appendix 3 for a comprehensive list of the variables used in this thesis as well as information on how they were coded).

There were two sources which I had at my disposal to determine whether an employee received a promotion or not. The first piece of information was found in the employee files. When raises were given to employees, this individual's supervisor would indicate on the employee amendment the reason for the raise (Type I). The following were all the possible reasons given for a raise: no change, annual cost of living increase, merit or increased responsibility, promotion, 3 or 6 month review, merit and annual increase, 3 or 6 month review and the end of training period, starting full-time, merit and 3 or 6 month review, change of job status involving full time and temporary part-time, and no answer. In conjunction with any pertinent information I could extract from the amendment form I created a new variable which indicated whether there appeared to be: a demotion, no movement,

a promotion, a lateral move or a reclassification as a result of increased responsibility.

I believe this variable, created from the employee file, may possess some validity problems because the results are based on the appearance on the form that a change in job status has occurred. When one considers Stone's (1975) contention that a promotion ladder is meant to act as an incentive to motivate the workers, it is possible that a supervisor may inform the employee that they have received a promotion, that is a raise in the grade level of their position in the firm, even when they may have actually received a lateral move or a demotion. This may occur within low level white collar jobs because many of the jobs require similar skills and responsibilities. As an employee in this firm I was aware of instances in which the initial screening of applicants was partially based on whether the individual appeared to possess high aspirations to advance. Those individuals who applied for positions on the lower rungs of the job ladder were not considered for the position if it was felt by the interviewer that the applicant would be too bored if they were employed in this position. In other words, there was a fear that the employee, having worked a short period of time for this company, might decide to leave because he or she did not find the job sufficiently stimulating. This belief on the part of the human resources department was based on past experience in high turnover of low level positions. By indicating to the employee that he or she had received a promotion and by giving an increase

in salary they may have averted having an employee leave. Further, one must question whether pay is a good indicator of promotion. Rather, it may reflect scarcity in the market of available workers to fill vacant positions. Being uncertain about the validity of this measure I sought a more reliable measure.

The second indicator of promotion (Type II), which reflects the movement up the job scale within this firm, was gathered from information present in the employee files. When examining each file I recorded the title of the position or positions held by the employee and the date at which the change, if any, occurred. The information was found on the same employee amendment forms which indicated reasons for a raise that had been given. The titles were then cross referenced with limited information made available on the job grade scheme used within the firm and extensive interviews with human resources personnel. From these two sources grade levels were recorded for each position an employee worked. The importance of using job grades is that it has a reasonably constant meaning over time.1

Since the job grade scheme was created by an external consulting agency, based on available information from job models, I assumed that the levels were determined by the same criteria. Thus, jobs at the same grade level must be considered by this firm to have a similar level of importance.2

In order to determine whether under the second approach a promotion occurred I subtracted the level of the position an employee worked in at the beginning of year t from the level of

the position the same employee worked in at the beginning of the year t+1. If the difference was a positive number, according to my criteria of promotion, a promotion occurred. If the result equaled zero no promotion occurred. Finally, if the difference turned out to be negative a demotion occurred. Unfortunately, I was unable to record whether under this scheme a lateral movement took place.

I then compared the two methods in order to determine how close the results were. Cross tabulations were performed for individual years. (See appendix 4 for the results from the beginning of 1982 through to the end of 1986.) The cross tabulations indicate that for the most part the results from both approaches are the same. The most extreme difference occurred in the information available for 1983. In this year 7 of 50 cases, 14 percent of the sample, did not have the same results using both methods. However, in examining the other extreme it appears that the information available for 1985 indicates that only 1 of the 55 cases, 2 percent of the sample, did not have the same results using the two approaches.

Of those individuals for whom the measures produced divergent results I am at a loss to explain why in three cases, two occurring in 1983 and one in 1986. It is certainly conceivable that either pertinent information was missing from the employee amendment file when the supervisor was indicating reasons for the salary increase. In addition, it is quite possible that the supervisor verbally expressed the reason for

the raise to the employee. Further, I may have inadvertently missed information when I was examining the files.

Of interest to my discussion is the fact that of the 277 cases 15 individuals were informed that they received either a promotion or a lateral move, as evidenced by the pay indication data. However, according to the job evaluation data this was not the case. In 13 of these cases the employee was told that a raise was given because they had received a promotion yet the job evaluation information indicates that either no promotion occurred or a demotion actually occurred. It is possible that a move did occur: however it would most likely have been a lateral move. Further, it is interesting to note that in two cases an individual was told that he or she had received a lateral move but according to the grade level scheme they appeared to have received a demotion.

After examining both findings I chose to use the job evaluation method. Not only does it appear to be the more conservative of the measures but the way in which this method was set up allowed me to use an interval type variable to use in two of my regression equations (the equations in which entry level position - LVLPOSH - and final position, either at termination or as of January 1, 1987 - FINLPOS -, were used as the dependent variables) and the event history analysis (see appendix 3).3

Limitations of the Data

Examples of some of the variables missing large numbers of responses include several of the specific performance appraisal indicators (which McGregor 1978, p.20, argues is quite common) such as: knowledge of work, quality of work, ability to learn new duties and initiative. In the case of the performance appraisal variables missing information exists as a result of the refusal by some of the supervisors, during some of the years studied, to complete the form and return it to the human resources department. Further, as a result of the fact that the data covers the period from January 1, 1981 to January 1, 1987 there are many instances in which employees were not employed during particular years and thus were considered to be missing data.

There are further limitations of the available data. The number of employees may not be an accurate account of the total number of employees who worked in the departments studied during the designated time period. That is, I was only able to study those employees whose files were present. There are situations in which an employee may have been transferred to another department within the same firm but not to a department studied and thus their personnel file would have been moved to the new department. In addition, it is difficult to determine how much effort was made throughout the years studied to accurately update the information within the file. There were instances, though only a handful, where it appeared as though employee amendments were not in the employee's file. However, I feel in the latter case the

instances were so few that the results will not be affected significantly. In the case of the former issue, it is difficult to determine what effect the missing employee files would have on the outcome. This is particularly true because it was impossible for me to determine the accurate number of employees who have transferred out of the departments studied.

Some of the individuals in the final sample used were missing information for certain variables. In the case of the linear regression models, those missing were excluded from the sample.

There are missing values for the variable indicating if someone is a member of a visible minority (VISMIN) or not because these employees had not worked at the firm for several years and those people asked within the human resources department did not remember who these individuals were. In the case of the variables years of previous pertinent job experience (YRSPRJBS) and level of education (LEVELED) this information was missing because there was no resume or information record from any of the interviews which would indicate past work experience or past educational experience in their file. Those employees missing values for the first rating of overall performance (EVAL1) had no mention of having had a performance appraisal. This does not mean that they did not receive one, rather it indicates that within their employee file there is no record of one. (See table 3.1 for a complete list of missing values.)

Table 3.1: Missing Values

Variables	Number of Missing
Vismin	3
Yrsprjbs	2
Leveled	4
Eval1	5

In the case of the event history model predictive regressions were calculated for three employees missing LEVELED and they were added to the sample. All other employees missing at least one or more variables were excluded from the sample because no significant predictive regression could be obtained.

Hypotheses

Drawing on the theoretical claims by the human capital and segmented labour market theorists, discussed in chapter 1, I now outline some of the more interesting hypotheses which I intend to test through the data available to me (see appendix 5 for a summary of the major hypotheses).

level of education

The human capital school would predict that level of education would positively effect the position one enters in the firm, as well as the probability of receiving a future promotion and salary increase. Level of education is used as a predictor of the employee's trainability. Some members of this school would expect the level of pre-labour market education to increasingly

have an indirect effect on future career advancement the longer one is employed in the firm.

The orthodox version and the radical version of the segmented labour market theory consider level of education to have a positive effect on entry level position, but no effect on future career promotions or income. Both schools consider level of education to be used as screening device to ensure a certain calibre of employee enters the bottom rungs of the primary sector. In the less extreme versions of this theory level of education may be a means to screen people into the ports of entry of higher job ladders (if more than one job ladder exists).4 In the case of secondary jobs, level of education has no impact on the types of jobs an individual gets. The radical school explains this screening process in terms of it ensuring that individuals from particular classes enter into jobs 'appropriate' for those in their class.

Years of previous pertinent job experience

Human capital theorists expect years of previous pertinent job experience will have a positive effect on the entry level position and more of an indirect positive effect on the prospects for future promotion and salary. Past experience is considered to be an investment by employees in skills which are expected to help them in learning firm specific skills in order that the employee can be more productive.

The segmented labour market theorists, of both persuasions, consider years of previous work experience to have no impact on entry level position and future promotion. The less extreme orthodox theorists would concede that there may be some positive effects to entry level position in the primary sector, assuming multiple job ladders, if particular skills are transferable between firms.5

years employed in this firm

All three schools expect that years employed in this firm will lead to an increase in the prospects for future promotion and increase in income. However, orthodox and radical versions of the segmented labour market theory limit this prediction to jobs in the primary sector. They believe that years employed in the secondary labour market jobs have no impact on future career prospects and future income. All three schools believe that on-the-job training will lead to greater productivity. For the human capital school this translates into employees receiving promotions. Whereas, the segmented labour market theory relies on the explanation that customs within the firm dictate rewards for seniority.

performance appraisal

The human capital school would expect that the more productive an individual employee is, as indicated by their performance appraisal, the greater the opportunity he or she will

be promoted. The traditional writers for the segmented labour market school do not consider the impact of performance appraisal ratings on future career prospects because they expect promotion to be tied to the customs already established in the firm.

lateral moves

While the human capital school does not directly address the effect of lateral moves on promotion prospects. They would expect that the increase in experience an employee receives by working in various positions in the firm will result in a greater breadth of knowledge of the firm and thus a more productive worker. This increase in productivity will lead to an increase probability of promotion and future income. While the orthodox version of the segmented labour market theory does not address the issue of lateral moves, the radical version would expect that there should be no direct effect of lateral moves on future promotion. The radical school would argue that since there is no actual difference between jobs the experience should not contribute to future promotion.

sex and visible minority status

The human capital school would not expect differences in entry level positions, promotions and income if every individual received the same returns for investment in level of education and on-the-job training. However, evidence provided by this school suggest that women and visible minorities on average do

not receive equal returns relative to white males. This has been attributed to several reasons including discrimination and choice on behalf of women and visible minorities not to seek the same positions as equally qualified white males. The segmented labour market theorists primarily attribute the placement of women and visible minorities to secondary labour market jobs as an effort on the part of employers to ensure a stable work force and profitable enterprise. The orthodox version explains the segmentation of the labour market in terms of ensuring a more efficient and cost effective mechanism of running a business. The radical version believes the segmentation the workers ensures that employers can control workers without the threat of protest by all workers.

The next chapter examines the hypotheses outlined in this chapter by using frequency tables, linear regression models and an event history model. Further, I will attempt to synthesize the human capital, institutional and radical schools, as well as the information presented within the white collar chapter in order to get a better understanding of white collar internal labour markets.

1 In the regression equations involving the job grade level as the dependent variable, examined in chapter 5, I attempted to control for the year hired in order to some how take into account the fact that employees in this study were hired in various years. This variable was not found to be significant, as well as being highly correlated with years worked in the firm. Thus it was taken out of the regression models.

2 Unfortunately, due to the confidentiality of the job evaluation process, I was unable to examine the method by which the levels were determined. (see Kaufman,1986, and Trieman,1979, for a discussion of job evaluations and Beatty & Beatty,1981, for the problems associated with job evaluation systems.)

3 Even though I selected the more conservative of the findings I am aware that because promotions are quite rare in this firm this method may decrease the chances of me detecting some significant effects.

4 Since I have a limited amount of knowledge about the skills required in the firm, I have decided to limit my analysis to the more traditional argument made by the segmented labour market theorists that level of education has no effect on which job ladder (assuming there are multiple job ladders) an employee will start on. It must be remembered that the segmented labour market theorists have primarily limited their analysis to blue collar jobs, which it may be argued requires less formal education than some low level white collar jobs.

5 As discussed previously, I only have a general knowledge of some of the jobs and thus I cannot critical examine the general transferability of the skills from other firms. The best I can do is point out the possibility that such an event may have occurred. I intend to concentrate on the more traditional expectations from the orthodox segmented labour market school.

Chapter 5

Variables, Results and Discussion

Prior to attempting regression equations to determine what variables led to promotion in Company Z I first wanted to determine that some form of internal labour market existed within this firm. I did this by examining the frequencies of LVLPOSH (Table 4.1) and FINLPOS (Table 4.2) - entry level position and final position respectively.

Having worked in this firm, for a brief period, I was aware they sought new employees from outside when positions could not be filled by current employees. Thus, while I knew that this firm was not an example of a perfect internal labour market, I did expect it to possess many of the characteristics of an internal labour market. I felt that if I could determine that there were particular ports of entry and that there were some promotions, then I could be justified in attempting to use the dual labour market argument in my analysis of further statistical results.

Table 4.1: Frequency of Entry Level Position (LVLPOSH)

Lvlposh	Frequency	Percent	Cumulative Frequency
1	11	9.6	11
2	12	10.5	23
3	45	39.5	68
4	6	5.3	74
5	3	2.6	77
6	9	7.9	86
7	4	3.5	90
8	3	2.6	93
9	3	2.6	96
10	3	2.6	99
11	2	1.8	101
12	3	2.6	104
13	9	7.9	113
14	1	0.9	114

Table 4.2: Frequency of Final Level Position (FINLPOS)

FINLPOS	Frequency	Percent	Cumulative Frequency
1	5	4.4	5
2	8	7.0	13
3	32	28.1	45
4	12	10.5	57
5	6	5.3	63
6	12	10.5	75
7	4	3.5	79
8	4	3.5	83
9	8	7.0	91
10	5	4.4	96
11	2	1.8	98
12	2	1.8	100
13	7	6.1	107
14	4	3.5	111
15	1	0.9	112
16	2	1.8	114

Superficially, it appears from the frequency for the variable LVLPOSH as though there are, for the most part, a limited number of ports of entry, concentrated primarily in the first three grade levels. The employees first hired in the three lowest rungs make up 59.6 percent of all employees in this sample. There are only two other levels in which just over seven percent of the employees first entered, that being level six and thirteen. It is important to note that the structure of this low level white collar part of this firm is more bottom than top heavy. Since there are more positions at the bottom rungs this means that most of the sample would have first been hired in these positions. That having been said, if one then examines the frequency for the last level recorded by each employee either because they had left the firm or because the time period studied ended on January 1, 1987 one sees a slightly different picture.

The frequency distribution for the variable FINLPOS indicates that some degree of promotion has occurred in this firm. In the case of the LVLPOSH frequency, 59.6 percent of the employees can be found in the first three positions. However, in the FINLPOS frequency only 39.5 percent of the employees are found in the first three grades. The findings support the belief that there exist some degree of internal promotion within this firm.

Regression Model #1

In the interest of testing the human capital and segmented labour market interpretations within a white collar company I first examined three separate regression models. In the first model the dependent variable explored was the entry position of employees (LVLPOSH). I included the level of education achieved (LEVELED) and years of previous pertinent work experience prior to entering this firm (YRSPRJBS) in the estimating equation. Human capital theory would suggest that both of these variables should have a positive impact on entry level into the firm. The segmented labour market approach would argue that after the level of education has been used to screen employees into the primary and secondary labour market jobs, level of education should have no effect on which job ladders (assuming there are multiple job ladders) individuals should enter. The segmented labour market approach would argue that YRSPRJBS would also have no effect on the entry level to the firm because previous specific skills learned in past employment would have little transferability to

this firm. Some orthodox segmented labour market theorists may argue that some primary sector workers may possess general skills which could be transferable to other firms, however these theorists would still expect this employee to enter at the ports of entry of the new firm. If however there existed several job ladders then they may start at a higher job ladder.

In keeping with the expectations of the human capital approach, I included the age of an employee when hired (FAGE) as a variable, which according to the theory, should produce a result which indicates that the older an employee is the more likely they would be to enter at a higher position in the firm having had the opportunity to develop previous experience. I also expected that younger employees would be more willing, than older employees to enter the bottom ranks in order to gain the experience needed to move to higher positions. I squared FAGE, resulting in (FAGESQ) (consistent with the human capital school; Cassell, et. al.,1975; Rosenbaum,1984) because I expected that there would exist in this company an inverted U shape relationship between age and level of entry. I believe this to be so because at a certain age I would expect the firm would be unwilling to hire employees at high level positions because of the limited future productivity expected by the employee. The segmented labour market theorists would expect that if age, controlling for experience, did have an effect on LVLPOSH it would be negative because younger and older workers would be considered less stable relative to workers between 25 and

approximately 45. If multiple job ladders existed the older and younger employees would enter at the bottom of lowest job ladders or in jobs characteristic of the secondary labour market. Those workers whose age fell in between may find themselves entering at the bottom tier of higher job ladders, particularly if these positions could not be filled internally.

I also included two dichotomous variables, one indicating the sex of the employee (MALE) and the other indicating whether the employee was white or non-white (VISMIN), within all models discussed within this thesis. Human capital, and segmented labour market theories would all predict that if discrimination existed within this organization, women and visible minorities would start at lower levels in the organization than males. Once in the firm, members of these two groups would be less likely to move up the job ladder or receive as large a salary increase relative to the their white male counterparts. In addition, the variable MALE is further included in the light of research findings on white collar work. It is most often observed that males tend to be favoured over females in hiring at higher levels, promotion and salaries. Alternatively, women may not seek the higher level positions and thus may be satisfied to remain in dead-end jobs. Regardless of the reasons the results would be the same. (see appendix 6 for the mean scores of various variables, by sex and visible minority status)

Further, throughout all the models in this thesis, I included dichotomous variables representing the various

departments examined (Corporate Control Department-DEPT1, Real Estate Department-DEPT2, Purchasing Department-DEPT4) in order to determine if there are differences between department approaches to hiring, promoting individuals and job ladders.

The main effect variables were included in equation 1 and only those variables which were significant at the .05 alpha level were left in the final equation. In addition, the variable MALE was included in the model because I had assumed that one's sex would have an impact on the level one entered the firm. I also included MALE because I wanted to compare this additive model with the interaction model (equation #2).

The final equation in which the variable LVLPOSH was the dependent variable and the main effects were used as the independent variables produced an equation in which only three of the main effects were found to be significant. (see table 4.3) The R-squared for equation #1 is 0.519. I choose to round off the parameter estimates to three decimal places.

Of interest in terms of the results of the correlations between the three independent variables and the dependent variable is that there is a strong correlation between the independent variable LEVELED and the dependent variable LVLPOSH. The correlation between these two variables is 0.637, with a significance of 0.0001. The fact that these two variables are so highly correlated and that LEVELED is the most significant variable in the regression equation indicates that most of the R-

squared can be attributed to the education an employee has prior to entering this firm.

In keeping with the theoretical framework established within this thesis I have included several interactions in equation #2. First, I added an interaction between LEVELED and MALE (MALEED) and an interaction between YRSPRJBS and MALE (MALEJB). Human capital writers have specifically argued that if discrimination existed within the firm, women would not receive the same returns to their education and past pertinent work experience as men do. The same argument would be made by this school in relation to whites and visible minorities, if discrimination existed. Since one would expect Whites to receive a better return for their education and previous pertinent work experience, I included an interaction between LEVELED and VISMIN (VISED) and an interaction between YRSPRJBS and VISMIN (VISJB).

Further, I included, within the human capital variables, an interaction between the variable MALE and the dichotomous variable measuring whether an employee was married at the time of being hired (MARRHD). The new variable created from the interaction of two variables was (MALEMAR). I would expect that a woman who was married would start at a lower position than a woman who was not married or a man who was married or not married. I believe this to be so because there are some grounds for thinking that a married woman may have chosen, or been expected, not to invest fully in her human capital potential in

order that she could concentrate on helping her husband develop his potential.

Finally, in each interaction equation within this thesis I have included a variable which is composed of an interaction between MALE and VISMIN known as (MALEVIS). The minimal evidence on white collar work indicates that visible minority women enter at lower levels within organizations, receive less salaries and are less apt to be promoted compared to white women and males. There is an abundant amount of evidence indicating that men do better than women in promotions and salaries within white collar hierarchies. If discrimination is present within this firm I would expect that visible minority women would experience fewer opportunities than any other groups.

Table 4.3: Regression Analysis with Entry Level Position (LVLPOSH) as the Dependent Variable

	Main Effect Equation #1	Interaction Equation #2
Variable	Coefficient~	Coefficient~
Intercept	-0.147	0.387
VISMIN(X1)	-2.351***	3.954*
MALE(X2)	0.886	-2.252
YRSPRJBS(X3)	0.108**	0.133***
LEVELED(X4)	0.552***	0.548***
VISED(X5)		-0.509**
VISJB(X6)		-0.226**
MALEED(X7)		0.311*
R-Squared	0.519	0.585
n=106		

*-.05
**-.01
***-.001
~unstandardized regression coefficients

Included in equation #2 are all significant interactions and the main effects that make up part of the interactions. The R-squared for this second model is 0.585.

Prior to continuing my analysis I conducted an F Test to determine whether the second equation with the interactions included was more significant than the first equation which contained solely the additive model. The following is the formula used to test whether there was an increase in significance.

$$F= \frac{((R2-R1)/(k2-k1))}{((1-R2)/(N-k2-1))}$$

RAB=the R-square from the second equation
RA=the R-square from the one equation
K2=the number of independent variables used in the second equation
K1=the number of independent variables used in the first equation
N=the number of subjects in the population

$$F= \frac{((0.5850-0.5187)/(7-4))}{((1-0.5850)/(106-7-1))} \qquad F=5.325$$

Since F equaled 5.325 the interactive model is more significant than the main effect model, my analysis will focus on the interactive model.

In examining the effects of the main effect terms involved in the interactions found in equation #2 post hoc F tests were conducted. These tests are run in order to determine the significance of the derived slopes and to see how much of a change occurred under the various conditions. In the case of the ratio variables, YRSPRJBS and LEVELED, three groups were considered. The groups consisted of those at the mean of each variable and those one standard deviation above and below the

mean. For the two dichotomous variables, VISMIN and MALE, an analysis was conducted in order to determine the mean difference between groups. (see Table 4.4 for results of the F test)

Table 4.4: F Test Results for those Variables Involved in the Interaction Terms, with Entry Level Position (LVLPOSH) as the Dependent Variable

section a: the effect of Level of Education on LVLPOSH conditional Visible Minority and Sex Status

White-Female	(VISMIN=0 MALE=0)	0.548**
Visible Minority-Female	(VISMIN=1 MALE=0)	0.039
White-Male	(VISMIN=0 MALE=1)	0.859***
Visible Minority-Male	(VISMIN=1 MALE=1)	0.350*

section b: the effect of Sex Status on LVLPOSH conditional on Level of Education

-1 STD. LEVELED	-0.764
Mean LEVELED	0.450
+1 STD. LEVELED	1.664*

section c: the effect of Visible Minority Status on LVLPOSH conditional on Years of Previous Pertinent Work Experience and Level of Education

-1STD YRSPRJBS, -1STD LEVELED	1.356
-1STD YRSPRJBS, Mean LEVELED	-0.631
-1STD YRSPRJBS, +1STD LEVELED	-2.618**
Mean YRSPRJBS, -1STD LEVELED	-0.162
Mean YRSPRJBS, Mean LEVELED	-2.149**
Mean YRSPRJBS, +1STD LEVELED	-4.136***
+1STD YRSPRJBS, -1STD LEVELED	-1.680*
+1STD YRSPRJBS, Mean LEVELED	-3.667***
+1STD YRSPRJBS, +1STD LEVELED	-5.654***

section d: the effect of Years of Previous Pertinent Work Experience on LVLPOSH conditional on Visible Minority Status

White	(VISMIN=0)	0.133**
Visible Minority	(VISMIN=1)	-0.093

*-.05
**-.01
***-.001

The first component of the regression equation which was examined was the one which involved the variables: LEVELED, VISMIN, MALE, VISED and MALEED. First,I examined the effect of LEVELED by varying both MALE and VISMIN (see Table 4.4 section a). The results, consistent with findings discussed in the section on visible minorities, indicate that the effects of the level of education on the entry level position is conditional on the sex and colour of the individual. Education has an effect on entry position for white males, visible minorities but also for white females. Only for visible minority females was there no effect. Further, it is interesting to note that the effect is strongest for white males, next strongest for non-white males, and least strongest for white females. These findings are consistent with some degree of discrimination practiced within this company when it comes to its hiring practices.

From the human capital perspective, it appears as though this firm does not equally recognize returns to education. Regardless of the fact individuals may have invested in the same amount of education Company Z may be unwilling to invest in women and Non-white males. Or these groups tend not to apply for the same jobs as their white male counterparts.

Both versions of the segmented labour market theory, while not focusing their discussion on education, would consider the fact that white males began at higher entry levels, relative to the other groups, as being consistent with the existence of discrimination which places women and visible minorities in the

secondary labour market jobs and white males in the primary labour market job ladders. In other words, the white males who enter at higher entry level positions are entering ports of entry of job ladders higher up in the firm.

When the effect of MALE on LVLPOSH, conditional on LEVELED, was examined at the mean of the variable level of education and one standard deviation above and below this mean, it was found that males, with a level of education one standard deviation above the mean, enter at a higher position in this firm relative to females who are in the same educational group (see Table 4.4 section b).

One interpretation of these findings is that women, who have completed a high level of education (relative to those individuals in this sample), are discriminated against in the position they are allowed to enter into. Certainly if the human capital theory were accurate regarding the effect of level of education there should be no sex differences. Other than the possible explanation of discrimination, this finding may be explained because women may not be receiving the same quality of education at the upper levels relative to their male counterparts. It is also possible that, when males and females, who were found to be in the group who had completed a level of education one standard deviation above the mean, are compared females may be found to have pursed academic subjects which are not considered to be as relevant to the firm as those taken by the males. Alternatively, perhaps women who are in the group

which had received a level of education one standard deviation above the mean apply for jobs in lower job ladders either because they are uncertain that they are capable of adequately doing the job or they may have family responsibilities which prevent them from seeking higher positions within the firm relative to males with approximately the same education.

Based on the evidence in this study, the segmented labour market school would argue that those individuals who can be found to have invested the most in education will have been screened to fill entry levels positions in higher job ladders. The radical version of the segmented labour market theory would suggest that those who have been the most successful in learning the capitalistic system, through the educational system, would be hired in the entry level positions of primary job ladders. The segmented labour market theories do not address the expectation of sex differences as a direct result of education. Though neither would be surprised to see sex differences between males and females in terms of where they were placed in the job ladder, however they would expect the sex differences to occur regardless of the educational level.

In order to determine the effects of the variable VISMIN on the level of entry into the firm, the two terms, LEVELED and YRSPRJBS, which interact with VISMIN were varied (see Table 4.4 section c). The results indicate that the effect of being a visible minority is increasingly negative the higher the level of education one possesses and the greater the number of years one

has of previous pertinent work experience. Both segmented labour market theories would expect that in the case of the lower level jobs, and jobs which are considered to be in the secondary labour market, level of education and years of previous work experience should have little effect on productivity and therefore there is no reason to differentiate between groups. Both versions of this theory consider education to be only a screening process for entry level position in the primary sector. Once employees have successfully been accepted into the primary sector, segmented labour market theories of both persuasions would predict visible minorities to be found in lower level job ladders (assuming multiple job ladders) relative to their white counterparts with same level of education because of the segmentation of these two groups. This theory considers previous work experience to have no bearing on entry into secondary labour market positions and only rarely, if ever, is it considered to have an impact on entry level position in the primary sector. The human capital school would have expected no differences in the returns for the same level of education and previous pertinent work experience. The fact that one exists implies the presence of discrimination (see discussion on interaction terms below for possible explanations).

Finally, an examination of the effect of the variable YRSPRJBS was completed by varying VISMIN (see Table 4.4 section d). The results indicate that the effects of number of years of previous pertinent work experience on entry level position is

positive for those workers who are white. Thus again, raising the possibility of discrimination within Company Z.

The results of the interaction terms indicate that visible minorities' past human capital investments in education and, to a greater extent, in previous pertinent work experience pay off less well than those of white applicants with the same investment in either LEVELED or YRSPRJBS. Thus, visible minorities enter at significantly lower levels compared to whites with either the same level of education or previous pertinent work experience. Discrimination may be occurring because of their colour. However, a possible alternative explanation arises if these visible minority employees were not originally from Canada and if they went to school and/or were employed in their country of origin prior to entering Canada. The results may not indicate that this group is being discriminated against because of colour, rather because of their foreign credentials. Alternatively, if these visible minority employees come from outside of Canada they may be applying for lower level jobs, relative to their white counterparts, in order to receive some Canadian experience.

Consistent with Cassell, et. al.'s (1975) findings for non-managerial white collar workers, females entered at job grades .311 levels below those of men with the same level of education. This may have occurred because those hiring workers felt that, even though these women had the same education as their male counterparts, women presented a greater risk to the firm's investment. Thus, by placing females in lower positions, where

they can be somewhat more easily replaced, the firm would not be harmed as much if these women were to leave for family reasons. Alternatively, perhaps females do not apply for the same positions as males, even though they have the same level of education. This may occur because they do not believe that the firm will hire them in positions frequented by males, or perhaps these women do not want to placed in positions that may detract them from their family responsibilities.

Regression Model #2

The second model looked at the variable final position (FINLPOS) as the dependent variable. In the case of independent variables, I included number of years worked in the firm (YRSWRKED) because, in both the human capital approach and the dual labour market theory, one would expect that an increase in the number of years in an organization would lead to an increase in job grade. The human capital theorist would expect this to occur because the worker would be receiving a return on the number of years of investment in on-the-job training at this firm. The segmented labour market theorist would expect an increase in the job grade because the firm would be more apt to hire from within as part of a training process in the orthodox version and as a vehicle for subdividing the work force in the radical version. However, if these low level white collar jobs possessed low, dead-end, job ladders then segmented labour market analysts would expect there to be little movement if any. Finally, if the firm rewards loyalty for remaining in their firm

(and it will be recalled that loyalty features prominently in the analyses of white collar), one means in which they may cultivate loyalty is through promotion and thus increases in pay.

LVLPOSH was included in this equation to determine whether an individual who enters at a low level has a greater opportunity to climb to a higher level because there is more room for him or her to move. One would expect, from a segmented labour market perspective, that the higher the port of entry position entered (assuming there are multiple job ladders) the greater the chance that the company considers the individual to possess all the characteristics associated with workers in the primary sector. If this were to be the case, the higher one starts the higher the grade one is more apt to end up in.2

I included the variable EVAL1 which measured the first performance appraisal received by the employee. If one accepts the argument that performance appraisals are a good indication of an employee's productivity and that this measure is used as part of the evidence in deciding promotion, then, taking a human capital approach, one would expect that the higher the rating, the higher the level to which an employee is likely to be promoted.

As in the first two regression equations, YRSPRJBS and LEVELED were included in the equation. The reason for including them as evidence for the human capital interpretation remains the same in this model. However, according to some of the proponents of this theory, such as Mincer (1974), I should expect LEVELED to

have less of an effect on FINLPOS since, once someone is hired, on-the-job training increases in relative importance in the determination of promotion and salary increases.

Both main effect variables and interactive variables were included. No interactive terms were found to be significant. The final additive model had an R-squared of 0.828. The number of individuals included in the sample was 109. All independent variables which were found to have a significant correlation of 0.50 or over were examined in pairs and the variable that was determined to contribute more significantly to the dependent variable were left in the model and the remaining one was in each case excluded. By limiting the model to those independent variables which were not highly correlated I hoped to reduce the degree of multiculinearity. Table 4.5 represents the final variables found to be the most significant in contributing to the dependent variable FINLPOS.

Table 4.5: Regression Analysis with Final Position (FINLPOS) as the Dependent Variable

Variable	Coefficient~	Coefficient@
Intercept	-1.588**	0
YRSWRKED(X1)	0.178***	0.176***
LVLPOSH(X2)	0.944***	0.867***
EVAL1(X3)	0.780***	0.132***
R-Squared	0.828	
n=109		

*-.05
**-.01
***-.001
~unstandardized regression coefficients
@standardized regression coefficients

The results of the regression equation indicate that for each additional year an employee works they will increase their final level in this firm by 0.178 of a level. This finding is consistent with the human capital and the segmented labour market approach because in each theory more seniority and experience within a firm results in an increase in productivity which results in an increase chance of promotion.

In the case of the variable LVLPOSH, for every one additional level the employee enters the firm there is an increase of 0.944 in their final level in this firm. If one accepts the possibility of there existing within this firm multiple job ladders, this finding would be consistent with the segmented labour market theory. That is, those who started in ports of entry in higher ranked job ladders will be accessible to high grade jobs within the firm. Alternatively, if there exists few positions off limits to external applicants then there may only be a limited internal labour market.

The fact that only 22 employees out of 114 received at least one promotion indicates that there is a rather modest amount of movement from the initial entry level position. Since, only approximately 20 percent of the sample experienced a promotion, LVLPOSH appears to be an intervening variable. And since LEVELED has such a strong impact on LVLPOSH it probably contributes, to a large extent, indirectly to the final position of an employee. The indirect effect of level of education is further supported by examining the indirect effects of level of education, through the

variable measuring entry level position. Consistent with findings from such human capital theorists as Mincer (1974), level of education has an indirect effect, but no direct effect, on final position (see Table 4.6). Both versions of the segmented labour market theory do not discuss any direct or indirect effect of level of education on future positions in the firm. However, it is important to consider that their discussion has primarily been limited to blue collar work.

Table 4.6: Indirect Effects, Through the Variable Entry Level Position, on Final Level Position (FINLPOS)

Indirect effect of Level of Education, conditional on the Visible Minority and Sex Status, on FINLPOS		
White Females	(VISMIN=0 MALE=0)	0.517
White Males	(VISMIN=0 MALE=1)	0.811
Non-White Males	(VISMIN=1 MALE=1)	0.330
Indirect effect of Sex Status, conditional on the Level of Education, on FINLPOS		
+1 STD LEVELED		1.571
Indirect effect of Visible Minority Status, Conditional on Previous Pertinent Work Experience and Level of Education, on FINLPOS		
-1STD YRSPRJBS, +1STD LEVELED		-2.471
Mean YRSPRJBS, Mean LEVELED		-2.029
Mean YRSPRJBS, +1STD LEVELED		-3.904
+1STD YRSPRJBS, -1STD LEVELED		-1.586
+1STD YRSPRJBS, Mean LEVELED		-3.462
+1STD YRSPRJBS, +1STD LEVELED		-5.337
Indirect effect of Previous Pertinent Work Experience, conditional on Visible Minority Status, on FINLPOS		
White	(VISMIN=0)	0.126
Indirect effect of the interaction terms, from the regression analysis with LVLPOSH as the Dependent Variable, on FINLPOS		
VISED		-0.480
VISJB		-0.213
MALEED		0.294

Additional indirect effects, through entry level position, suggest that visible minorities (conditional on years of previous pertinent work experience and level of education) and females (conditional on level of education) continue to be at a disadvantage at achieving final positions located higher up in the firm's job ladders relative to whites and males respectively.

The final significant variable within this model is EVAL1. Its significance is 0.0029. For every increase of 1 on the scale used for an employee's first evaluation of their overall job performance there is an increase of 0.780 in an employee's final level in this company. The effect of EVAL1 tends to support the human capital argument, if this measure has been a real measure of productivity, or potential to be productive.

Regression Model #3

The third and final linear regression model was completed with the variable final salary received either during last year of employment or during the last year of this study (FINLSAL- see appendix 4 for further discussion of variable) as the dependent variable. The independent variables that were used for the regression equation in which FINLPOS was the dependent variable, were again used in this equation. Two additional variables were included. Salary at time of entry (SALWKH) was included using the same reasoning discussed for including LVLPOSH as a variable in the equation when FINLPOS is the dependent variable. Second, FINLPOS was included in order to substantiate the fact that the grade level has a direct bearing on salary.

Both main effect variables and interactive variables were introduced but no interactive variables were found to be significant.

The final additive model was chosen after omitting SALWKH, which was significant in this model but did not contribute to the explained variance because it was highly correlated with other independent variables. The variable SALWKH was correlated highly with both YRSWRKED and FINLPOS. The correlation between SALWKH and YRSWRKED was -0.51413 with a significance of .0001. The correlation between SALWKH and FINLPOS was 0.55122 with a significance of .0001.

The following Table 4.7 includes all the main effects in the additive model which were significant in contributing to the FINLSAL which is measured in dollars/week. The number of individuals considered in this model was 109. The R-Squared of this equation is 0.786.

Table 4.7: Regression Analysis with Final Salary^ (FINLSAL) as the Dependent Variable

Variable	Coefficient~	Coefficient@
Intercept	73.812*	0
EVAL1(X1)	27.799*	0.097*
YRSWRKED(X2)	5.570**	0.114**
FINLPOS(X3)	39.815***	0.826***
R-Squared	0.786	
n=109		

*-.05
**-.01
***-.001
^measured in dollars/week
~unstandardized regression coefficients
@standardized regression coefficients

Of the variables attempted in this model FINLPOS is the most important independent variable effecting FINLSAL. FINLPOS is highly correlated with FINSAL. The correlation between these two variables is 0.87287 and the significance of this correlation is 0.0001. For every additional level the employee is located in the firm either at the time just prior to leaving or if working in this company as of January 1, 1988 their last position as of this date, there is an increase of $39.81 to their final salary per week. Within this regression model the relationship between FINLPOS and FINLSAL has a significance of 0.0001. What is important to point out is that in a previous model the variable LVLPOSH was included and significantly effected the variable FINLSAL. However, it was highly correlated with the variable FINLPOS. The correlation between these two variables was .87830 and the significance was 0.0001. I chose to leave the variable FINLPOS in and omitted the variable LVLPOSH because it seems likely that the effect of LVLPOSH affects salary largely through its effect on FINLPOS. The fact that the variable FINLPOS is the most significant variable (of those variables tested) and is very significantly highly correlated with the FINLSAL suggests that the variables which help to produce the final position also largely determine final salary.

The two remaining significant variables in this regression equation are YRSWRKED and EVAL1. Since I have already discussed the link between salary and promotion, and more specifically FINSAL and FINLPOS I will simply mention the remaining results.

The variable EVAL1 has a significance of 0.0448 at an alpha level of .05. This model indicates that for every unit increase on the scale used for an employee's first evaluation of their overall job performance there is an increase of $27.80 in their salary per week.3 The final independent variable found to have a significant impact on FINSAL is YRSWRKED which has a significance in this model of 0.0149. The results of this equation indicate that for each additional year that an individual works in this company he or she receives an increase of $5.57 to their salary per week.4

The Event History Model

The Hazard Rate

Prior to running the event history model, I calculated the at risk set5 and hazard rates6 to determine the set of individuals who were at risk of receiving a promotion during a specific year and the probability of receiving promotion during a particular year. According to Allison (1984) the hazard rate while being an unobserved variable still controls both the occurrence and the timing of events. Thus, he argues, it is a fundamental dependent variable in an event history model(p.16). The results can be seen in the Table 4.8.

Table 4.8: Distribution of Year of Promotion

Year	Number Promoted	Number at Risk	Estimated Hazard Rate
1982	7	54	0.130
1983	11	53	0.208
1984	4	54	0.074
1985	1	57	0.018
1986	5	67	0.075
total	28	285	

Event History

In order to compensate for some of the difficulties inherent in assuming a linear relationship in a regression model an event history model was employed using logistic regression procedures. The event history analysis does not treat promotion as a static phenomena. Thus, promotion will be treated as a process and not only as an isolated occurrence.

According to Allison (1984) an event history is;

> ideal for studying the causes of events, they typically possess two features--censoring and time-varying explanatory variables--that create problems for the standard statistical techniques such as multiple regression (p.9).

He claims that censoring7 and time-varying explanatory variables(independent variables which change over time-such as age and number of years worked in the firm) can produce serious bias and loss of information (1982,p.62). This method deals with the censoring problem by ensuring that individuals whose time to the first promotion is censored contribute exactly what is known about them. In other words, they did not receive a promotion in any of the five years studied. Further, time-varying explanatory variables are easily included because each year at risk is

treated as a distinct observation (Allison,1984,p.19). Finally, linear regression equations assume that if the event examined does not occur, the chances of the event happening in the future is zero. In the event history model, even though an individual does not experience the event the model still considers the probability of the individual experiencing the event in the future.

The problem is that the time studied is arbitrary. This is a result of the fact that the change in personnel forms in 1982 meant that some of the questions asked of the applicants were different prior to 1982 than during or after 1982. In order to ensure that my data was as complete as possible I chose to concentrate on the records after 1981. However, I did take information from application forms prior to 1982 in order to fill in any information gaps in employee demographics not present after this date in their file. In addition, I had a two month time constraint to examine this firm's files. For the two above reasons I have chosen to limit my examination to a five year period.

In order to achieve as large a sample as possible the method of random censoring was used. In other words, not all individuals examined began their career in the company in 1982. Nor did all employees continue until at least the end of 1986. Allison (1984) suggests methods for testing sensitivity of random censoring (p.29). This was attempted and the various scenarios resulted in different results. The dichotomous variable indicating whether

one received at least one previous promotion (PREPRM) was not found to be a significant determinant of promotion. Further, the dichotomous variables, representing whether an employee worked during a particular year (YR82, YR83, YR84, YR85, YR86), were tested together, using one year as a reference group, and were not found to be significant. As a result of these two findings I decided to expand my sample beyond those individuals working prior to 1982 and after and those who started after 1982.

Further, repeated events were controlled for by changing the coding of the variable representing the grade level an employee was in during a particular year (LEVELPOS). In other words, if an employee was in a grade 5 job in year t he or she was coded 5 for LEVELPOS. However, if the employee received a promotion to a grade 7 job in year t+1 the variable LEVELPOS, for that employee, would be recoded with a 7 for the year t+1. The same is true for the variable which indicates whether an employee has received at least one previous promotion in this firm (PRMPRE). If the employee has never received a previous promotion then he or she would receive a 0 for the variable PRMPRE. However, if a promotion is received, all further coding of this variable is given a 1. Thus indicating for the remainder of the employee's employment, or for the remainder of the study, that this employee has received at least one previous promotion. This variable was determined by subtracting the first level hired from the level employed in the first year of study. If the two periods were the same year, the original level was subtracted from the level from

the following year. This procedure of subtracting the level from a particular year from the next year was continued until the employee received a promotion, left the firm, or the period studied ended. Since the nature of my data made it difficult for me to determine the number of promotions, prior to 1981, an employee received I was forced to confine this variable to the measuring of 'at least one promotion received'. (See pp.53-55 for discussion of problems with repeated events.)

This model has followed all workers throughout their career from the beginning of 1982 to the end of 1986 within this company. All coding was based on information taken from the employee files. No additional information, other than what was available about the individual employees, was assumed in terms of them receiving a promotion. When they received a promotion they were coded 1 on the dependent variable (PROMOTED). If they did not receive a promotion they received a 0. The independent variables are briefly discussed below.

The variable indicating the number of years worked in this firm (YRSWRKED - as discussed in the regression equations) and the variable representing the age (AGE) of the employee were adjusted for an employee, in each year of the study, to indicate the change. The variables MALE, VISMIN, LEVELED, LVLPOSH, YRSPRJBS (see appendix 4 for an explanation of variables and the change in the coding of the variable YRSPRJBS from its previous use in the linear regression models), DEPT1, DEPT2, and DEPT4 (I included the department variables because no one in the sample

had been transferred from a department originally hired into another department in this study) are constant variables and have been discussed in reference to the variables used in the above regression equations. The dichotomous variable representing the marital status of an employee in each year (MARRIED) is coded the same way as the variable MARRHD - discussed in the regression equation with the independent variable entry level position. Further, LVLPOSH was used as in the regression equations. LVLPOSH was introduced to control for the fact that the lower the position in the firm the more possible ranks to be promoted through in a given period of time. Dichotomous dummy variables- YR82, YR83, YR84, YR85, YR86 - were created to determine whether employment policies had changed over the five years examined, particularly in the interactions between MALE and year and VISMIN and year. Finally, the individual year variables were used to control for variations between the years in order to focus on individual characteristics. For example, if the record of an individual, being examined, was taken from year 1983 then 1 was recorded for the variable YR83. If it was taken from another year, the variable YR83 was coded 0.

Table 4.9: Logistic Regression Analysis with PROMOTED as the Dependent Variable

Variable	Main Effect Model	Interaction Model
Intercept	-0.633	0.803
YRSWRKED(X1)	-0.327***	-0.314**
YR83(X2)	1.048**	1.015*
PRMPRE(X3)	0.420	1.960*
VISMIN(X4)	-0.199**	-1.816
LEVELPOS(X5)	-0.105	-0.815*
VISMINPOS(X6)		0.770*
VISPRPRM(X7)		-2.116*

n=285

*-.05
**-.01
***-.001

In order to determine which logistic regression model in Table 4.9 is the most appropriate to interpret, I subtracted -2 Log L of the first model (additive) from -2Log L of the second model (interactive). (160.19 - 151.92 = 8.27) The difference between the second and first model in terms of degrees of freedom is 2. Therefore at the .05 alpha level of significance the interactive model is more significant and thus I have chosen to interpret the second model.

In this event history scenario there were 28 promotions out of 285 observations. Thus, the probability of promotion is 0.10. I converted the log of the odds estimates to probability estimates. In the case of the independent main effect variables I multiplied the probability of promotion by (1-probability of promotion). I then multiplied the result (.09) by the log of the odds of the main effect variables which were not involved in an

interaction - see Table 4.10 for results (see Hanushek & Jackson,1977, chapter 7, for a further discussion of this method).

Table 4.10: Probability Estimates for the Main Effect Variables with PROMOTED as the Dependent Variable

Variable	
YRSWRKED	-0.029**
YR83-	0.091*

*-.05
**-.01
***-.001

The results of the logistic regression using the interactive model indicate that there remain two main effect variables that are not involved in any interactions. For each additional year an employee works in this firm the probability of promotion in any given year decreases by .03. This negative effect was found in all the event history models attempted prior to choosing this one. These findings are contrary to the results found for the variable YRSWRKED in the linear regression equations involving FINLPOS and FINLSAL as dependent variables. Moreover, the decreasing effect of YRSWRKED on the probability of promotion is the opposite effect of what is expected by both the human capital and segmented labour market schools. Human capital theorists may have expected YRSWRKED to be negative only if there had been an interaction with AGE, since firms should be willing to invest in individual workers at the height of their productivity, between the ages of 25 and 40 (Rosenbaum,1984). These results may indicate that there does not exist the same type of internal

labour market within my white collar firm that one finds in the blue collar sector.

The other main effect variable is YR83. For those workers that were employed in 1983 the probability of them receiving a promotion in any given year increases by .09. Unfortunately, I have only a limited knowledge of the history of Company Z and thus I am not in a position to try and analyze what event(s) or circumstance(s) unique to the firm in 1983 may have led to there being an increase in the probability of workers employed during that year, relative to the other years, receiving a promotion.

Interestingly enough, the sex of an employee was not a significant factor in the probability of promotion. To my knowledge the owners of this firm have been very active in the implementation of pay equity legislation, thus they may have consciously tried not to discriminate when it came to promotion. However, the fact that I found that women still do not enter the firm at the same level as males with the same education implies that women are still disadvantaged from the start.

In the interpretation of the significant interactions, arising out of the event history model, a total of 12 possible groups were considered. The following equation was used to determine the probability of each group receiving a promotion.[8]

$$\frac{1}{1+e^{-(a+b1X1+b2X2+b3X3+b4X4+b5x5+b6X6+b7X7+e)}}$$

Since YRSWRKED(X1) and YR83(X2) were not involved with the interactions I multiplied the beta coefficients for Yrswrked(X1) and Yr83(X2) by their respective means. Then, I held the results for these two terms constant in all 12 circumstances. In addition, the same intercept was used in all cases. Both the variables, PRMPRE(X3) and VISMIN(X4) were considered at 0 and 1. LEVELPOS(X5) was looked at in three different possible combinations, at its mean and one standard deviation above and below the mean (see results below in Table 4.11).

Table 4.11: Probability of Receiving a Promotion, Results From the Event History-Under the 12 Different Conditions

white, had not received a previous promotion

Group 1	Group 2	Group 3
0.08	0.004	0.0002

non-white, had not received a previous promotion

Group 1	Group 2	Group 3
0.07	0.006	0.05

white, received at least one previous promotion

Group 1	Group 2	Group 3
0.37	0.03	0.001

non-white, received at least one previous promotion

Group 1	Group 2	Group 3
0.06	0.05	0.05

Group 1-one standard deviation below the mean job grade level-(LEVELPOS)
Group 2-mean job grade level-(LEVELPOS)
Group 3-one standard deviation above the mean job grade level (LEVELOS)
(see appendix 7 for the mean, minimum, maximum and standard deviation of each independent variable.)

In general, all but one group had a very small probability (8 percent or less) of receiving a promotion. Further, individuals employed in Group 1 jobs had more room to move up the job ladders than those in Group 2. This perhaps indicates that the jobs occupied by members of Group 2 tended to be more likely to be dead-end in nature relative to those jobs found in Group 1.

The group which had the greatest probability of being promoted were white individuals, who had already been promoted and who were employed in a job grade one standard deviation below the mean. This may be a result of the fact that these whites, as predicted by the segmented labour market approach, had already been chosen, when hired, for the primary job ladders and were moving up slowly in the firm. Since the variable controlling for entry level position was not significant, the mere fact that they had started at a lower position in the company was not the reason for them having an increased probability of being promoted, relative to the other groups.

This group when compared to non-Whites with the same characteristics are found to have the largest difference of any similar White-non-White comparison. These Whites have a 31 percent greater chance of being promoted relative to their non-White counterparts. This difference may be explained if non-Whites are given only token promotions within jobs in the lower level tiers. Alternatively, dual labour market theorists may argue that this group enters the firm at the bottom of short job ladders and that they have been promoted to a point where there

are very few positions, accessible to them. Or they may simply enter secondary labour market jobs with no promotion possibilities what so ever.

White employees who had not received a promotion and who fell into Group 3 had the least probability of receiving a promotion. This may have been a result of this group being placed in a high position on entry and thus there were very few if any positions for them to be promoted to. If members of this group had been promoted to another position above the top level studied or transferred to a job outside the departments or company (but still within the organization) studied their employee file would have been sent with them. Under these conditions I did not have access to their files.

Visible minorities working in upper level positions had a greater probability of receiving a promotion than their white counterparts, regardless of whether they had already received a promotion or not. This may mean that those Whites who were felt to be worthy of promotion were given promotions to job ladders higher than is examined in this study. Those Whites who are considered too risky to be further invested in (by giving them a promotion) may be stuck in dead-end jobs in the higher level job ladders. Alternatively, non-Whites who are employed in the top positions may be employed on the bottom rungs of the top job ladders, and therefore may have more room to move up, relative to white employees who may be at the top and thus in dead-end positions. Finally, since we have already seen that this firm

hires visible minorities at lower positions than their white counterparts possessing either the same level of education and years of previous pertinent work experience, non-white employees hired at the bottom ends of the top job ladders may be more productive than their white counterparts and thus they may be seen as more worthy of promotion.9

Since there was no indication that in any one year there was a deviation in the probability of promotion for either visible minorities (or women), it is rather unlikely that the firm sought to redress in large numbers the discrimination experienced by visible minorities when being hired. However, they may have tried to redress past discriminations by giving non-Whites greater chances for promotion, if they were able to make it into the upper level positions, relative to whites employed in the upper level positions.

In comparing those employees in Group 2, regardless of colour, it appears as though the employees who have received a previous promotion may be on longer job ladders, relative to the group which has not received a promotion. Perhaps, this means that a decision is made quite quickly as to whether an employee is worthy of being invested in by this firm. If they are, they enter job ladders which allow them to experience at least one promotion (which most likely bring them into the mean range of LEVELPOS) and have the potential (though the probability is only between .03 and .05), within the limitation of the number of available jobs above them, of receiving a further promotion.

Whereas, the group, which is seen as too risky to the firm to invest in, is placed in dead-end jobs with virtually no opportunities for receiving a promotion from their current job.

An Examination of the Effect of Lateral Moves on Promotion

In the light of Rosenbaum's (1979) and Wellbank et al.'s (1978) contention that lateral moves can be used as an attempt to develop a potential candidate for future promotion, I tried to create a variable that would account for lateral moves within this firm. Since I only had information from the beginning of 1981, and thus not the entire history of each employee at this company, I was unable to use the number of lateral moves as an independent variable in my regression equations. None the less I wanted to at least examine, even if somewhat superficially, whether Rosenbaum's (1979) claim was correct in my firm, or whether this firm opted to use lateral moves to employ their personnel in similar type jobs with no further potential to learn new skills (as discussed by Wellbank et al., 1978).

In order to do this, I used the comments made by supervisors as to the reasons given for a raise (found in the employee files - as discussed earlier) to determine whether a lateral move took place and I also collapsed the variable 'reclassification' into the lateral move category. While this might not be the most ideal measure, for reasons I have already discussed above, this was the only way I had of measuring lateral moves.

I decided to create categories representing the total number of lateral moves by each employee during the period studied. The result was the creation of three groups consisting of either zero, one, or two lateral moves. The following is a brief discussion of the variables used in this analysis and the means for selected variables for each group covering the years 1981 through to the end of 1986 (Table 4.12).

Of those variables examined FINLPOS, LVLPOSH, YRSWRKED and EVAL1 have all been discussed previously. Additional variables used in examining the lateral moves include: distance travelled (DISTRVL), years an employee worked in the firm during only the years studied (YWKINSTUDY), and whether a promotion occurred (PROMOTION). The variable DISTRVL is the absolute difference of FINLPOS and LVLPOSH. This variable indicates the number of levels moved by each employee. The problem with this variable is that it does not take into account that in each department there are not always jobs at each level. Thus, for example, if there were two employees at level three but in different departments, the fact that they were promoted to the next level within their respective departments does not necessarily mean that they have been promoted to the same level. While the grade scheme is meant to take into account all jobs and all departments the fact that these two individuals may not be promoted to the same level would indicate that the job ladders and opportunities vary between departments. Finally, the dichotomous variable PROMOTION was

coded 0 for no promotion and 1 if a promotion occurred and was based on the job grade scheme information.

Table 4.12: Means on Selected Variables of Groups Experiencing No, One, or Two Lateral Moves

Variable	No Moves	One Move	Two Moves
LVLPOSH	5.48	3.96	2.33
	(82)	(23)	(9)
FINLPOS	6.56	4.78	4.56
	(82)	(23)	(9)
DISTRVL	1.09	0.83	2.22
	(82)	(23)	(9)
YRSWRKED	4.09	6.96	7.78
	(82)	(23)	(9)
YWKINSTUDY	3.32	5.26	4.78
	(82)	(23)	(9)
EVAL1	2.70	2.43	2.89
	(77)	(23)	(9)
PROMOTION	0.34	0.39	0.56
	(82)	(23)	(9)

-n is indicated in the bracket

Due to the limitations of some of the variables used, it is only possible to make some observations about the means of the various groups found in Table 4.10. Of particular interest is the fact that the group which experienced two moves on average worked a total of 4.78 years during the period studied and recorded a mean of 0.56 for the variable promotion. Conversely, the group which experienced only one move worked on average 5.26 years during the period studied and recorded an average of 0.39 for the promotion variable.

The group which experienced two lateral moves received, on average, a higher first evaluation than the other two groups. Therefore, it is possible that this group's stronger showing may have encouraged the firm to train them for future promotion by having them get to know as much about their department as possible.

While the above findings may imply that those who have experienced two moves may on average be promoted more, there appears to be other information available within the above means which suggest that this statement cannot be made without hesitation. Since there are only nine employees within the group which experienced two moves during the time studied, one or two individuals with extreme values could have resulted in a large overall mean for the group. Further, while those who received two moves have worked at the firm on average less years during the period studied, compared to the group which only experienced one move, when one examines the variable Yrswrked it is the group which experienced one move which has a higher average number of total years worked in this firm relative to the group with two moves.

Since the group which experienced two lateral moves, also, on average entered at a lower position relative to the other groups, one must question whether their lateral moves are a result of them being in a low position with very little stimulating responsibilities? Perhaps, the move into similar type positions could have been used as a tool to keep these employees

motivated and reduce the firms turnover? Alternatively, these employees may have been used to fill voids in positions which had become vacant for one reason or another? While many of these questions cannot be answered from my data, it certainly raises questions for future research in white collar lateral moves.

1 One of the problems with the coding of this variable is that widowed, divorced, and separated women have been classified as not married. These women, having at one time been married, could have at one time acted in the same way as those women who are classified as married. Not having a more through description of individual employee's histories I was unable to create a solely never married category because there was no way of determining that individuals who may have indicated that they were single upon entry into the firm did not previously experience a divorce or the loss of a spouse prior to the period studied. The only data available was current marital status.

2 The problem with this data set, when it comes to determining the effects of this variable in the regression analysis, is that it may take more time for some employees to work up the job ladder than others and this cannot be taken into account when some of the employees have only been working in this firm one or two years and others eight or nine years.

3 When the effect of the first evaluation on final salary is decomposed, using the final position as the indirect effect, only 47 percent of the direct effect of first evaluation on final salary remains.

4 When the effect of the number of years worked in this firm on final salary is decomposed, using final position as the indirect effect, only 44 percent of the direct effect of number of years in the firm on final salary remains.

5 Risk Set "is the set of individuals who are at risk of event occurrence at each point in time (Allison,1984,p.16)."

6 Hazard Rate "is the probability that an event will occur at a particular time to a particular individual, given that the individual is at risk at that time. It is calculated each year by dividing the number of events by the number of individuals at risk (Allison,1984,p.16)."

7 Censoring occurs when an individual is not observed during one or more periods under consideration (Allison,1984, pp.28-29).

8 Hanushek and Jackson (1977) recommend using this formula, once having used logistic regression, when trying to interpret the probability of groups experiencing an event (pp.200-203).

9 It is important to remember that the variable EVAL1 measures the first available recorded employee appraisal. Thus, if I were to have further appraisals I might have found that Non-Whites in Group 3 were found to be more productive than their White counterparts.

Conclusion

In my thesis I have attempted to go beyond the traditional examination of internal labour markets for blue collar workers by examining the applicability of the most prominent theoretical arguments to white collar work. The availability of employee files for company Z gave me a somewhat unique opportunity to test the human capital and segmented labour market theories. The data available to me did not allow me to establish the motivations of those responsible for the promotion structure of this firm. The data did allow me to examine the extent to which the determinants of hiring position and promotion are more or less consistent with the alternative models. But the resulting analysis does not allow me to reject or accept entirely any one of the theories. Further, my analysis indicates to me that there is some degree of overlap between the predictions of the ostensibly different theories. However in some instances, I am able to point out that certain findings are more clearly consistent with one theory than another. While my sample is somewhat small and limited to one firm, I believe I can draw six conclusions from my results which call for further investigation on a much more comprehensive scale.

First, it is clear from the frequencies as well as the regression equations involving entry level position, that the white collar departments investigated do not possess a single comprehensive job ladder. Even though a majority of employees enter the firm at the bottom three grade levels, there still

exists a large percentage of workers who enter above the bottom ranks. This finding may suggest that there exist no entrenched job ladder. Alternatively this finding may simply indicate that there exists several small short job ladders throughout each department. If either is the case one may have to rethink the importance of the entry level position within individual job ladders and question whether white collar job ladders are actually protected from the external market. If individuals are hired from outside the firm to fill many of the higher grade positions, the firm may have to entice individuals to choose their firm. Market forces of supply and demand may impact on the salary and benefits (an issue not included in this thesis) individuals receive. This finding would raise questions as to the accuracy of segmented labour market theorists who emphasize custom within the firm as determinant of wage and promotion rather than market forces.

Second, in showing that level of education only impacts directly on entry level position my data substantiate both versions of the segmented labour market theory, as well as the arguments made by some human capital theorists such as Mincer (1974). This highlights the fact that factions in all three schools consider level of education to act in the same manner, even though they have alternative explanations as to why they expect these results. Furthermore, the fact that level of education has an indirect effect on final position in the firm (consistent with human capital theorists such as Mincer, 1974),

suggests that orthodox segmented labour market theorists should clearly differentiate blue collar jobs and some low level white collar jobs in terms of the education needed. Since level of education did have an impact on employees entering or ending up in higher positions in this sample, this finding would suggest that at least some of the jobs examined can be classified as lower tier primary labour market jobs.

Third, my results indicate that in this firm years of previous pertinent work experience contribute to the entry grade level. This finding raises questions as to whether the segmented labour market argument, that employment experience has no bearing on the level of entry into a firm because skills are so firm specific that they are not transferable, can be used to describe white collar work. Rather, Osterman (1984) may be correct in his belief that some white collar skills are brought from outside the firm and only minimal firm specific skills must be obtained on the job. If these results were found over several firms, this would suggest that some forms of clerical work can be classified as being in the lower tier of the primary sector because orthodox segmented labour market theorists would expect previous experience from other firms to have no impact on entry level position in the secondary labour market.

Fourth, as expected by all three schools, years worked in this firm helped contribute to the final grade level position within the firm and the final salary. This variable more than any other examined within this thesis indicates the similarities of

all three schools under consideration. All expect that, at least in the primary sector, more years of work with a firm lead to an increase in productivity and thus an increase in grade level and income.

However, the effect of years worked in the firm contributed negatively to the probability of promotion in the event history model. Since years worked in this firm was significant and negative in all the scenarios attempted for the event history I am quite confident of the direction and significance of the effect of this variable relative to any of the other variables in the event history model. The question is why do there appear to be somewhat conflicting findings from the linear regression models relative to the logistic regression model (used in the event history analysis), for this particular variable? One possible reason for the finding from the event history model, indicating that years in the firm has a negative effect on the probability of promotion, is the fact that a significant number of promotions were given between January 2, 1982 and January 1, 1983. This period is the second of the years covered by my data. Some special circumstance produced a wave of promotions in 1983. But this may have partially exhausted the opportunities for promotion for several years. So after 1983, most workers accumulated experience without getting promoted and this no doubt affected the results.

Besides, as discussed earlier, one must remember that the samples and dependent variables for the regression and event

history analysis are somewhat different and thus one may expect to have different results. If one accepts the results from the event history analysis, the implications are that perhaps seniority may not be as important a reason for promotion as has been found in most labour market studies of any kind.

If, however, one considers the linear regression equations to be the more representative of the actual situation in the firm then the findings would be consistent with the expectation that in white collar firms employees are rewarded in various ways (such as the receiving of promotions) for their loyalty to their employers. Further, it may be possible that employees are evaluated quite early in their employment for their potential for advancement. Those employees who are deemed worthy of promotion may rise from the lower ranks quite quickly and those who are not remain stuck at their original entry grade level.

Fifth, as expected by all three schools, women and visible minorities do not do as well as white males. Since my information largely takes the form of quantitative data I am only able to speculate as to some the reasons why my results indicate that women and visible minorities are more likely to enter this firm at positions lower than white males with similar achieved characteristics. Does discrimination exist? If yes, what form does it take? As discussed earlier, many of the explanations of discrimination used by human capital theorists and the orthodox segmented labour market theorists are very similar in nature. Both schools consider employer's "taste" for white male workers

as a possible reason for unequal treatment. In addition, both schools consider statistical discrimination as a reason for the existence of discrimination. Alternatively, perhaps visible minorities and women do not seek as high a grade level to enter as their white male counterparts with the same achieved status? In the case of the final position and final salary one may expect that if discrimination exists it may occur indirectly through the use of job evaluations. In other words, visible minority workers may be given lower job evaluation grades relative to white workers thus leading to white workers receiving a greater probability of promotion. While it is true that visible minority employees have a greater probability of promotion, relative to whites, if they are in the top grade levels, they are more often than not found in positions below the top rungs. The limitations of my data, in terms of it being quantitative and the limited number of visible minority members within my sample do not allow me to make any definite conclusions regarding why the results are not similar for all groups.

Finally, while the examination of the effect of lateral moves on promotion is quite limited due to the small population and limited knowledge available on the occurrence of lateral moves, the evidence suggests that further research must take place in order to determine the impact of such transfers. If the number of lateral moves does have an impact on promotion in clerical work this would further verify the fact that this form of work possesses characteristics traditionally found in primary

sector jobs because there would be additional skills and knowledge obtained in each job.

To my knowledge the orthodox segmented labour market theorists have ignored the possibility of lateral moves and have concentrated their efforts on upward transfers. The radical school while not addressing lateral moves directly, would most likely expect that, since most moves are between virtually homogeneous jobs, lateral moves do not in actual fact increase the breadth of knowledge of the firm, in any way relevant to job performance. Thus, an increase in lateral moves should not directly increase the probability an individual will receive a promotion. Like the radical theorists, human capital theorists do not directly address the impact of lateral moves on promotion and income. However, the human capital theorists would expect that the increase in experience, as a result of working in various jobs, would lead to a greater productivity-which leads to an increase in the probability of promotion and a higher income.

In addition to the questions raised above with respect to lateral moves, if it is found that lateral moves do contribute to an increase in the probability of promotion, it must be determined at what point, on average, a negative relationship begins between the number of lateral moves and the probability of promotion. Finally, there may be variations between firms and industries in the use and reasons for the use of lateral moves.

It is hoped that many of the results and questions raised in this thesis will encourage others to examine internal labour

market theories within the white collar context. Further, it is important in the process of examination to not only clearly attempt to examine the descriptive nature of white collar work and the promotion and wage process, but it is also important to attempt to explain the origins of the process. Perhaps by understanding the origins of the internal labour market in the white collar sector, and clerical work in particular, we may be able to clearly support or disapprove part or all of the three major internal labour market theories.

Appendix #1

Job Titles and their Grade Levels

Corporate Control Department

Grade	13	Internal Auditor, Financial Strategist.
Grade	10	Assistant Controller, Corporate Accountant, Manager(Treasury).
Grade	9	Credit Services Manager, Leasing Administrator, Supervisor Documentation Control, Accountant(Accounts Payable-Supplier Relations & Reconciliation Section), Supervisor(Accounts Payable-Supplier Relations & Reconciliation Section), Payroll Supervisor.
Grade	8	Secretary.
Grade	7	Financial Strategist.
Grade	6	Accounting Clerk(Credit Operations), Foreign Purchase Control Clerk, Senior Accounting Clerk(Accounts Payable Documentation Control), Senior Accounting Reports Clerk, Section Head(Accounts Payable).
Grade	5	Foreign Purchasing Clerk, Unit Processing Clerk.
Grade	4	Intermediate Accounting Clerk, Bank Reconciliation Clerk, Accounting Reports Clerk(Accounts Payable), Senior Documentation Control Clerical, Correspondence Clerk(Accounts Payable), Senior Reconciliation Clerk(Accounts Payable), Senior Benefits Reconciliation Clerk, Senior Payroll Clerk, Senior Accounting Clerk(Credit Operations).
Grade	3	Batch Banking Clerk, Banking Clerk, Secretary, Sales Processing Clerk, Intermediate Benefits Clerk, Jr. Benefits Clerk, Factory Payroll Clerk, Intermediate Input Clerk, Jr. Accounting Clerk, (Accounting Clerk Inquiry Clerk, NSF Processing Clerk, Processing Clerk--Credit Operations), Documentation Clerk(Accounts Payable), Expense Reconciliation Clerk, Retail Reconciliation Clerk, Intermediate Reconciliation Clerk(Payroll Department), Payroll Processing Clerk, Collection Clerk.

Grade	2	Input Clerk, Clerical Assistant, Statistical Clerk, Receptionist/Typist, Direct Line Clerk, Microfilm Clerk, Documentation Control Clerk, Intermediate Clerk(Supplier Relations), Telephone Clerk, Red Folder Clerk, Receptionist.
Grade	1	File Clerk.

Real Estate Department

Grade	18	Financial Control Manager.
Grade	16	Leasing Manager.
Grade	15	Lease Administration Manager=Occupancy Manager.
Grade	14	Insurance Manager, Construction Manager, Legal Manager, Leasing Supervisor.
Grade	13	Senior Leasing Representative, Legal Negotiator(Assistant).
Grade	12	Legal Supervisor, Building Services Manager, Lease Administration Supervisor, Occupancy Supervisor, Special Projects, Insurance Supervisor.
Grade	11	Loss Control Officer.
Grade	10	Insurance Analyst, Building Superintendent, Insurance Assistant.
Grade	8	Senior Secretary, Assistant Lease, Special Projects Coordinator, Administrative Assistant.
Grade	7	Senior Occupancy Clerk=Group Leader, Accountant.
Grade	6	Lease Administrator=Accounting Clerk, Occupancy Clerk=Lease Administrator.
Grade	5	Clerk/Secretary, Legal Secretary, Legal Secretary, Claims Secretary.
Grade	4	Bookkeeper.
Grade	3	Assistant Administrator.
Grade	2	Receptionist/Typist, Lease Administration Assistant.

Purchasing and Telecommunications Department

Grade 11	Telecommunication, Operations & Office Services Manager.
Grade 10	Purchasing & Telecommunication Administration Manager, Purchasing Supervisor.
Grade 9	Purchasing Agent=Office Service Buyer=Buyer.
Grade 7	Financial Strategist.
Grade 6	Administrative Assistant, Purchasing Assistant, Supervisor of Mail Room.
Grade 5	Shipper/Receiver(store room), Shipper/Receiver(central), Telecommunications Clerk.
Grade 4	Micro Input & Purchasing Clerk.
Grade 3	Accounting & Input Clerk, Department Secretary/Clerk, Secretary/Receptionist, Clerical Assistant, Switchboard Operator/Mail Room Clerk, Switchboard Operator.
Grade 2	Telex Operator.
Grade 1	Mail Room Clerk.

Appendix #2

Performance Appraisal

Evaluate the employee on the job now being performed. Check (✓) the statement which most nearly expresses your overall judgment on each quality.

						Consider the employee's performance since the last appraisal and show by a check (✓) whether he has gone back, remained stationary or gone ahead in each of the qualities listed to the left		
						Has improved	Little or no change	Has gone back
KNOWLEDGE OF WORK Consider knowledge of his/her job gained through experience general education, specialized training	○ Well informed on all phases of work	○ Knowledge thorough enough to perform in job without assistance	✓ Adequate grasp of essentials Some assistance	○ Requires considerable assistance	○ Inadequate knowledge	✓ COMMENTS		
QUANTITY OF WORK Consider the volume of work produced under normal conditions Disregard errors	○ Rapid worker Unusually big producer	○ Turns out good volume	✓ Average	○ Volume below average	○ Very slow worker	✓ COMMENTS		
QUALITY OF WORK Consider neatness accuracy, and dependability of results regardless of volume	○ Exceptionally accurate practically no mistakes	○ Acceptable unusually neat accurate occasional errors or rejections	○ Seldom necessary to check work	○ Often unacceptable frequent errors or rejections	○ Too many errors or rejections	✓ COMMENTS		
ABILITY TO LEARN NEW DUTIES Consider the speed with which he/she masters new routine and grasps explanations Consider also ability to retain this knowledge	○ Exceptionally fast to learn and adjust to changed conditions	✓ Learns rapidly Retains instructions	○ Average instructions required	○ Requires a great deal of instruction	○ Very slow to absorb Poor memory	✓ COMMENTS		
INITIATIVE. Consider the tendency to contribute develop and or carry out new ideas or methods	○ Initiative resulting in frequent saving in time and money	✓ Very resourceful	○ Shows initiative occasionally	○ Rarely shows any initiative	○ Needs constant prodding	✓ COMMENTS		
CO-OPERATION Consider manner of handling business relationships	○ Goes out of the way to cooperate	✓ Gets along well with associates	○ Acceptable	○ Shows reluctance to cooperate	○ Very poor cooperation	✓ COMMENTS		
JUDGMENT AND COMMON SENSE Does he/she think intelligently and make decisions logically?	○ Thinks quickly logically Outstanding	○ Judgment usually logical	○ Fairly reliable	○ Inclined to be illogical	○ Poor unreliable	✓ COMMENTS		

2. Describe other qualities (not listed above) which deserve mention either as strengths or weaknesses

3. Comment on employee's strengths, giving examples from job performance.

4. Comment on important areas needing improvement, giving examples from job performance

5. Rate overall performance in relation to how well tasks and responsibilities are carried out and how well job responsibilities are met. (Check ✓)

Excellent	Very Good	Good	Satisfactory	Unsatisfactory
☐	☐	☐	☐	☐

6. What action will be taken to encourage and assist employee's improvement in above areas? What are expected results and how will they be measured?

Employee comments on appraisal

Employee Signature _____ Date _____

Appraised by _____ Date _____
(Signature)

Approved by _____ Date _____
(Signature)

Reviewed by _____ Date _____
(Personnel) (Signature)

Please forward to Personnel Department for retention in personnel file. Thank you.

Appendix #3

Coding of Variables

Independent Variables

1. MALE
   coded 0 for female
   1 for male

2. VISMIN (whether the individual is a visible minority)
   coded 0 for white
   1 for other

3. FAGE (age when first hired)

4. FAGESQ (Fage*Fage)

5. YRSWRKED (number of years worked in the firm)
   (calculated by subtracting the year that the individual was hired from either the last year employed or the last year this study examined)

6. YRSPRJBS (number of previous years of pertinent experience)
   (this variable was created by examining each employees past work history. I assumed that the employee while not necessarily including all past work experiences on their resume or interview would have most likely included those work experiences which were relevant to the job they were seeking in hopes that all relevant experience would increase their chances of being hired.)

   coded 00 for no previous pertinent experience
   01 for >0 months and <=6 months
   02 for >6 months and <=1 year
   03 for >1 year and <=1 year six months
   04 for >1 year six months and <=2 years
   05 for >2 years and <=2 years six months
   06 for >2 years six months and <=3 years
   07 for >3 years and <=3 years six months
   08 for >3 years six months and <=4 years
   09 for >4 years and <=4 years six months
   10 for >4 years six months and <=5 years
   11 for >5 years and <=5 years six months
   12 for >5 years six months and <=6 years
   13 for >6 years and <=6 years six months
   14 for >6 years six months and <=7 years
   15 for >7 years and <=7 years six months
   16 for >7 years six months and <=8 years
   17 for >8 years and <=8 years six months
   18 for >8 years six months and <=9 years

19 for >9 years and <=9 years six months
20 for >9 years six months and <=10 years
21 for >10 years and <=10 years six months
22 for >10 years six months and <=11 years
23 for >11 years and <=11 years six months
24 for >11 years six months and <=12 years
25 for >12 years and <=12 years six months
26 for >12 years six months and <=13 years
27 for >13 years and <=13 years six months
28 for >13 years six months and <=14 years
29 for >14 years and <=14 years six months
30 for >14 years six months and <=15 years

7. MARRHD (whether the employee was married when first hired)
coded 0 for not married (includes those single
widowed
divorced
separated)
coded 1 for married (includes those married or
living in common law)

* This variable was only included in the equation in which entry level position was the dependent variable.

8. LEVELED (level of education)
coded 01 for no schooling
02 incomplete grade school
03 graduated primary school
04 incomplete high school
05 completed grade 12
06 completed grade 12 and certificate
07 completed grade 13
08 completed grade 13 and certificate
09 some college or university or accounting courses
10 completed college or accounting courses at college
11 completed college and certificate
12 bachelors degree
13 bachelors and certificate
14 bachelors and some accounting courses
15 two bachelors degrees
16 bachelor of business administration
17 bachelor degree and some professional school
18 masters degree
19 professional degree(e.g. accountant, law)

Rather than coding LEVELED by number of years of school completed, I coded this variable as a quasi interval variable. I partially patterned the coding after the Canadian Quality of Life Survey (published by York University) coding of their education variable.

9. EVAL1 (rating of overall performance-the first evaluation completed by the employee's supervisor)
   coded 0 unsatisfactory
         1 satisfactory
         2 good
         3 very good
         4 excellent

10. Dummy variables were created for the three departments looked at in this study.

   a) DEPT1 (working in the corporate control department)
      coded 0 no
            1 yes

   b) DEPT2 (working in the real estate department)
      coded 0 no
            1 yes

   c) DEPT4 (working in the purchasing department)
      coded 0 no
            1 yes

11. SALWKH (salary ($/Week) at the time hired in this company)

12. LVLPOSH (level of position hired for-level entry position)

13. FINLPOS (final level of position either during the last year employed or during the last year of the study)

<u>Independent Variables</u>

1. LVLPOSH (level of position hired for-entry level position)

2. FINLPOS (final level of position either during the last year employed or during the last year of study)

3. FINLSAL (final salary received either during last year of employment or during the last year of the study--salary is measured by dollars/week)

The difficulty with this variable is that the final salary for each employee may not occur in the same year. That is if an employee left the firm in 1984 the final salary would be based on this individuals 1984 salary. However, if the employee was still working with the firm as of january 1, 1987 their final salary would be in 1987 dollars.

Additional Event History Variables
Independent Variable

1. YRSPRJBS (number of previous years of pertinent work experience)(see further discussion of this variable in explanation of independent variables used in the regression equations.) However unlike the regression equation variable this one is coded in number of years and not in half years.

coded 00 for no previous pertinent experience
01 for >0 months and <=1 year
02 for >1 year and <=2 years
03 for >2 years and <=3 years
04 for >3 years and <=4 years
05 for >4 years and <=5 years
06 for >5 years and <=6 years
07 for >6 years and <=7 years
08 for >7 years and <=8 years
09 for >8 years and <=9 years
10 for >9 years and <=10 years
11 for >10 years and <=11 years
12 for >11 years and <=12 years
13 for >12 years and <=13 years
14 for >13 years and <=14 years
15 for >14 years and <=15 years

Independent Variable

PROMOTED (whether individual received a promotion in the particular year investigated.)

coded 0 no promotion received
1 promotion received

Appendix #4

The Measuring of Promotion from Two Different Sources

The following tables examine promotion from two different sources. The columns reflect the reasons given, by a supervisor, for an employee receiving a raise(Type I). This information was obtained from an employee amendment form. This measure includes the categories of demotion, no movement, promotion, lateral move and reclassification. The rows represent the information based on the job grade scheme used by the firm and extensive interviews by human resources personnel(Type II). This measure was limited to demotion promotion and no promotion.

Table 1 1982

N=53		Type I Demotion	No Move	Prom	Lateral	Reclass
	Demotion	0	0	0	1	0
Type II	No Prom	0	39	2	4	0
	Prom	0	0	7	0	0

Table 1 1983

N=50		Type I Demotion	No Move	Prom	Lateral	Reclass
	Demotion	0	0	0	1	0
Type II	No Prom	0	34	4	0	1
	Prom	0	1	8	1	0

Table 1 1984

N=53		Type I Demotion	No Move	Prom	Lateral	Reclass
	Demotion	0	1	1	0	0
Type II	No Prom	0	42	2	0	2
	Prom	0	0	5	0	0

Table 1 1985

N=55		Demotion	No Move	Type I Prom	Lateral	Reclass
	Demotion	0	0	0	0	0
Type II	No Prom	0	49	1	3	0
	Prom	0	0	2	0	0

Table 1 1986

N=66		Demotion	No Move	Type I Prom	Lateral	Reclass
	Demotion	0	0	0	0	0
Type II	No Prom	0	55	3	2	1
	Prom	0	0	4	1	0

Appendix #5

Hypotheses of Direct Effects

I.V.	D.V.	Human Capital	Segmented Labour Market	
			Orthodox	Radical
LEVELED	LVLPOSH	+ve	+ve^	+ve^
	FINLPOS	+ve#	none	none
	FINLSAL	+ve#	none	none
YRSPRJBS	LVLPOSH	+ve	none@	none
	FINLPOS	+ve	none	none
	FINLSAL	+ve	none	none
YRSWRKED	LVLPOSH	N.A.	N.A.	N.A.
	FINLPOS	+ve	+ve	+ve
	FINLSAL	+ve	+ve	+ve
EVAL1	LVLPOSH	N.A.	N.A.	N.A.
	FINLPOS	+ve	none	none
	FINLSAL	+ve	none	none
LATERAL MOVES	LVLPOSH	N.A.	N.A.	N.A.
	FINLPOS	+ve	none	none
	FINLSAL	+ve	none	none

N.A.-Not appropriate.

^-As discussed in the footnote at the end of chapter 4, I have chosen to use the more traditional segmented labour theory argument. Both versions believe level of education will have a positive effect in as much as this variable is used as a screening device to place individuals into the appropriate labour market. Once it has been determined which labour market the individual worker will enter both versions of this school predict level of education will have no effect on entry level position.

#-Some human capital theorists argue that level of education has only an indirect effect on FINLPOS and FINLSAL.

@-Some orthodox segmented labour market theorists consider the possibility that some general skills may be transferable in the primary sector from one firm to another.

APPENDIX #6

Means of Various Groups

	TOTAL	MALE	FEMALE	WHITE	NON-WHITE	MALE WHITE	MALE NON-WHITE	FEMALE WHITE	FEMALE NON-WHITE
LVLPOSH	4.92	7.20	4.28	5.43	3.42	8.53	4.38	4.67	2.94
	(114)	(25)	(89)	(87)	(24)	(17)	(8)	(70)	(16)
FINLPOS	6.04	8.64	5.31	6.47	4.96	9.65	6.50	5.70	4.19
	(114)	(25)	(89)	(87)	(24)	(17)	(8)	(70)	(16)
FINLSAL	418.40	527.52	387.75	444.48	349.33	604.88	363.13	405.53	342.44
	(114)	(25)	(89)	(87)	(24)	(17)	(8)	(70)	(16)
DISTRVL	1.12	1.44	1.03	1.05	1.54	1.18	2.13	1.03	1.25
	(114)	(25)	(89)	(87)	(24)	(17)	(8)	(70)	(16)
YRSWRKED	4.96	4.52	5.08	4.68	6.38	4.06	5.50	4.83	6.81
	(114)	(25)	(89)	(87)	(24)	(17)	(8)	(70)	(16)
FAGE	27.37	29.32	26.82	27.68	27.29	29.12	29.75	27.33	26.06
	(114)	(25)	(89)	(87)	(24)	(17)	(8)	(70)	(16)
RAGE	32.32	33.84	31.90	32.36	33.67	33.18	35.25	32.16	32.88
	(114)	(25)	(89)	(87)	(24)	(17)	(8)	(70)	(16)
EVAL1	2.67	2.77	2.63	2.62	2.90	2.69	3.00	2.61	2.87
	(109)	(22)	(87)	(85)	(21)	(16)	(6)	(69)	(15)
YRSPRJBS	7.43	10.12	6.66	7.46	8.13	10.47	9.38	6.71	7.50
	(112)	(25)	(87)	(85)	(24)	(17)	(8)	(68)	(16)
LEVELED	8.54	11.08	7.79	8.67	8.58	11.65	9.88	7.10	7.94
	(110)	(25)	(85)	(83)	(24)	(17)	(8)	(66)	(16)

DISTRVL=FINLPOS-LVLPOSH
FAGE=age when hired
RAGE=age when last in firm or on January 1, 1986
See Appendix 3 for explanation of variables.

Appendix #7

Additional Results from the Logistic Regression with PROMOTION as the Independent Variable

Variable	Mean	Minimum	Maximum	Standard Deviation
YRSWRKED	5.165	1	17	3.358
YR83	0.186	0	1	0.390
PRMPRE	0.509	0	1	0.501
VISMIN	0.705	0	1	0.457
LEVELPOS	6.119	1	16	3.829
VISMNPOS	4.712	0	16	4.561
VISPRPRM	0.323	0	1	0.468

Bibliography

Abella, Judge R.
1984 **Equality in Employment: A Royal Commission Report** Ottawa: Minister of Supply and Services Canada.

Albrecht, M.
1978 "Women, Resistance to Promotion and Self-Directed Growth." **Human Resource Management** Vol.17, No.1, Spring, pp.12-16.

Allison, P.
1984 **Event History Analysis** Beverly Hills: Sage Publications, Inc.

Allison, P.
1982 "Discrete-Time Methods for the Analysis of Event Histories." in Leinhardt, S.(ed.) **Sociological Methodology 1982** San Francisco: Jossey-Bass Pub., pp.61-98.

Allport, G.
1955 **The Nature of Prejudice** Cambridge: Addison-Wesley Pub., Co..

Anisef, P., M. Bertrand, U. Hortian and C. James
1985 **Accessibility to Post Secondary Education in Canada: A Review of the Literature** Ottawa: Department of the Secretary of State.

Armstrong, P. and J. Peter
1986 **White collar workers, trade unions, and class** London: Croom Helm.

Attewell, P.
1987 "Big Brother and the Sweatshop: Computer Surveillance in the Automated Office." **Sociological Theory** Vol.5, Spring, pp.87-99.

Averitt, R.
1968 **The Dual Economy** New York: W.W. Norton.

Barnes, W. and E. Jones
1974 "Difference in Male and Female Quitting." **Journal of Human Resources** Vol.9, No.4, pp.439-451.

Basil, D.
1972 **Women in Management** New York: Dunellen Pub., Co., Inc..

Beatty, R. and J. Beatty
1981 "Some Problems with Contemporary Job Evaluation Systems." in Trieman, D. & H. Hartmann(eds.) **Women, Work and Wages: equal pay for jobs of equal value** Washington, D.C.: National Academy Press, pp.59-78.

Beck, E., P. Horan and C. Tolbert II
1980 "Industrial Segmentation and Labor Market Discrimination." **Social Problems** Vol.28, No.2, pp.113-130.

Becker, G.
1964 **Human Capital** New York: Columbia University Press.

Becker, G.
1957 **The Economics of Discrimination** Chicago: University of Chicago Press.

Benewitz, M. and A. Zucker
1971 "Human Capital and Occupational Choice-A Theoretical Model." in Kiker, B.(ed.) **Investment in Human Capital** Columbia, South Carolina: University of South Carolina Press, pp.354-359.

Ben-Porath, Y.
1971 "Production of Human Capital and the Life Cycle of Earnings." in Kiker, B.(ed.) **Investment in Human Capital** Columbia, South Carolina: University of South Carolina Press, pp.130-149.

Billingsley, B. and L. Muszynski
1985 **No Discrimination Here? Toronto Employers and the Multi-Racial Workforce** Toronto: Social Planning Council of Metropolitan Toronto and The Urban Alliance on Race Relations.

Blackburn, R. and M. Mann
1979 **The Working Class in the Labour Market** London: The MacMillan Press Ltd.

Blau, F. and M. Ferber
1986 **The Economics of Women, Men, and Work** Englewood Cliffs: Prentice-Hall.

Blum, A.
1971 **White-Collar Workers** New York: Random House.

Blum, A.
1964 **Management and the White-Collar Union New York: American Management Association.**

Bonacich, E.
1972 "A Theory of Ethnic Antagonism: The Split Labor Market." **American Sociological Review** Vol.37, pp.547-559.

Bowles, S. and H. Gintis
1975 "The Problem with Human Capital Theory-A Marxian Critique." **American Economic Association** Vol.65, No.2, pp.74-82.

Boyd, M.
1984 "At a Disadvantage: The Occupational Attainment of Foreign Born Women in Canada." **International Migration Review** Vol.18, No.4, Winter, pp.1091-1119.

Braverman, H.
1974 **Labor and Monopoly Capital** New York: Monthly Review Press.

Breton, R.
1981 **The Ethnic Community as a Resource in Relation to Group Problems: Perceptions and Attitudes** Toronto: Centre for Urban and Community Studies, University of Toronto, Research Paper No.122.

Breton, R. and H. Roseborough
1971 "Ethnic Differences in Status." in Blishen, B., F. Jones, K. Naegele and J. Porter(eds.) **Canadian Society** Toronto: MacMillan Company of Canada Ltd., pp.450-468.

Brown, H.P.
1977 **The Inequality of Pay** Berkeley: University of California Press.

Brown, M. and P. Philips
1986 "The historical origin of job ladders in the US canning industry and their effects on the gender division of labour." **Cambridge Journal of Economics** Vol.10, pp.129-145.

Buckland, L.
1985 "Education and Training Equal Opportunities or Barriers to Employment." in Abella, Judge R. **Research Studies of the Commission on Equality in Employment** Ottawa: Ministry of Supply and Services Canada, pp.131-156.

Cain, G.
1976 "The Challenge of Segmented Labour Market Theories in Orthodox Theory: A Survey." Journal of Economic Literature Vol.14, pp.1215-1257.

Canadian Human Rights Commission
1987 Annual Report 1986

Canadian Human Rights Commission
1985 Annual Report 1984

Canadian Human Rights Commission
1983 Annual Report 1982

Cannel, C. and R. Kahn
1953 "The Collection of Data by Interviewing." in Festinger, L. & D. Katz(eds.) Research Methods in the Behavioral Sciences New York: Holt, Rinehart & Winston, pp.327-380.

Carter, M. and Carter, S.
1985 "Internal Labor Markets in Retailing: The Early Years." Industrial and Labor Relations Review Vol.38, No.4, pp.586-611.

Cassell, F., S. Director and S. Doctors
1975 "Discrimination Within Internal Labor Markets." Industrial Relations Vol.14, No.3, pp.337-344.

Chen, M. and T. Regan
1985 Working in the Changing Canadian Society Toronto: Butterworths.

Clairmont, D., R. Apostle and R. Kreckel
1983 "The segmentation perspective as a middle-range conceptualization in sociology." Canadian Journal of Sociology Vol.8, No.3, pp.245-271.

Clairmont, D., M. MacDonald and F. Wein
1980 "A Segmentation Approach to Poverty and Low-Wage Work in the Maritimes." in Harp, J. and J. Hofley(eds.) Structured Inequality in Canada Scarborough: Prentice-Hall of Canada, Ltd., pp.285-316.

Crispo, J
1985 "A brief submitted to the Committee on Pay Equity." Toronto: November 28. Submission #25.

Crompton, R. and G. Jones
1984 White-Collar Proletariat Philadelphia Temple: University Press.

Crozier, M.
1971 **The World of the Office Worker** Trans. David Landau Chicago: The University of Chicago Press.

Dale, J.
1962 **The Clerk in Industry** Liverpool: Liverpool University Press.

Davies, M.
1973 "Woman's Place Is at the Typewriter: The Feminization of the Clerical Labor Force." in Edwards, R., M. Reich and D. Gordon(eds.) **Labor Market Segmentation** Toronto: D.C. Heath and Company, pp.279-296.

Denzin, N.
1970 **The Research Act** Chicago: Aldine Pub., Co.

Devereaux, N. and Rechnitzer, E.
1980 "Higher Education-Hired?: Sex Differences." in Statistics Canada **Sex Differences in Employment Characteristics of 1976 Post Secondary Graduates** Labour Canada Women's Bureau.

DiPrete, T. and W. Soule
1988 "Gender and Promotion in Segmented Job Ladder Systems." **American Sociological Review** Vol.53, pp.26-40.

Doeringer, P. and M. Piore
1971 **Internal Labor Markets and Manpower Analysis** Mass: D.C. Heath & Company.

Doeringer, P.
1967 "Determinants of the Structure of Industrial Type Internal Labour Markets." **Industrial and Labour Relations Review** Vol.20, pp.206-220.

Dominion Bureau of Statistics
1971 **Occupational Classification Manual Census of Canada, 1971** Ottawa: Vol.1, Catalogue No.12-536.

Edwards, R.
1975 "The Social Relations of Production in the Firm and Labor Market Structure." in Edwards, R., M. Reich and D. Gordon(eds.) **Labour Market Segmentation** Mass: D.C. Heath & Company, pp.3-26.

Eichler, M.
1983 **Families in Canada Today** Toronto: Educational Publishing Company.

Ells, S.
1973 "How Polaroid Gave Women the Kind of Affirmative Action Program They Wanted." **Management Review** Vol.62, No.11, Nov., pp.11-15.

Estable, A.
1986 **Immigrant Women in Canada-Current Issues** Ottawa: Prepared for the Canadian Advisory Council on the Status of Women.

Fleming, J.
1981 "The Immigrant Woman in Canada." **A Right to Recognition Part I.** Toronto: Proceedings of the Conference.

Fox, M. and S. Hesse-Biber
1984 **Women at Work** Palo Alto: Mayfield Pub., Co.

Frances H. and E. Ginzberg
1985 **Who Gets the Work?** Toronto: The Urban Alliance on Race Relations and the Social Planning Council of Metropolitan Toronto.

French, W.
1964 **The Personnel Management Process** Boston: Houghton Mifflin Company.

Game, A. and R. Pringle
1983 **Gender at Work** Sydney: George Allen and Unwin.

Gardner, R. and R. Kalin(eds.)
1981 **A Canadian Social Psychology of Ethnic Relations** Toronto: Methuen Pub.

Glenn, E.N. and R. Feldberg
1979 "Proletarianizing Clerical Work: Technology and Organizational Control in the Office." in Zimbalist, A.(ed.) **Case Studies on the Labor Process** New York: Monthly Review Press, pp.51-72.

Gordon, D., R. Edwards and M. Reich
1982 **Segmented Work, Divided Workers** New York: Cambridge University Press.

Gordon, D.
1972 **Theories of Poverty and Underemployment** Toronto: D.C. Heath and Company.

Grandjeau, B. and P. Taylor
1980 "Job Satisfaction Among Female Clerical Workers." **Sociology of Work and Occupation** Vol.7, No.1, pp.33-53.

Greenglass, E.
1982 **A World of Difference: Gender Roles in Perspective** Toronto: John Wiley and Sons.

Grinker, W., D. Cooke and A. Kirsch
1970 **Climbing the Job Ladder: A Study of Employee Advancement in Eleven Industries** New York: E.F. Shelly & Company, Inc..

Gruenfeld, E.
1981 **Performance Appraisal: promise and peril** Ithaca: New York State School of Industrial and Labor Relations, Cornell University, Key Issues Series No.25.

Gruenfeld, E.
1975 **Promotion: practice, policies and affirmative action** Ithaca: New York State School of Industrial and Labor Relations, Cornell University, Key Issues Series No.17.

Gunderson, M. and W. Riddell
1988 **Labour Market Economics** Toronto: McGraw-Hill Ryerson Limited.

Gunderson, M.
1985 "Discrimination, Equal Pay, and Equal Opportunities in the Labour Market." in Riddell, W.(ed.) **Work and Pay: The Canadian Labour Market** Toronto: University of Toronto Press. Part of The Report of the Royal Commission on the Economic Union and Development Prospects for Canada, pp.219-265.

Hanushek, E. and J. Jackson
1977 **Statistical Methods for Social Scientists** New York: Academic Press.

Hartman, J. and J. Hedblom
1979 **Methods for the Social Sciences** Westport Connecticut: Greenwood Press.

Hartmann, H.
1976 "Capitalism, Patriarchy, and Job Segregation by Sex." **Signs** Vol.1, No.3, Part 2, pp.137-169.

Henry, F.
1986 **The Dynamics of Racism in Toronto** Toronto: York University.

Hodson, R. and R. Kaufman
1982 "Economic Dualism: A Critical Review." **American Sociological Review** Vol.47, Dec., pp.727-739.

Hoffmann, C. and J. Reed
1981 "Sex Discrimination? The XYZ Affair." The Public Interest No.62, Winter, pp.84-102.

Hurn, C.
1985 The Limits and Possibilities of Schooling Boston: Allyn and Bacon, Inc..

Jacoby, S.
1984 "The Development of Internal Labor Markets in American Manufacturing Firms." in Osterman, P.(ed.) Internal Labor Markets Cambridge Mass.: The MIT Press, pp.23-69.

Jowell, R. and P. Prescott-Clarke
1970 "Racial Discrimination and White-collar Workers in Britain." Race Vol.11, No.4, pp.397-417.

Kalleberg, A. and A. Sorensen
1979 "The Sociology of Labour Markets." Annual Review of Sociology Vol.5, pp.351-379.

Kanter, R.
1979 "Differential Access to Opportunity and Power." in Alvarez R. & K. Lutterman(eds.) Discrimination in Organizations: Using Social Indicators to Manage Social Change San Francisco: Jossey-Bass, pp.52-68.

Kanter, R.
1978 A Structural Approach to Affirmative Action A paper presented at the Conference on Equal Pay and Opportunity for Women in Europe, Canada, and the United States, sponsored by the German Marshall Fund and the Center for Research for Women, Wellesley College, May 1978.

Kanter, R.
1977 Men and Women of the Corporation New York: Basic Books, Inc., Pub..

Kaufman, L.
1986 Job Evaluation Systems: Concepts and Issues Kingston: Industrial Relations Centre at Queen's University at Kingston, Research and Current Issues Series No.45.

Kerr, C.
1954 Labor Mobility and Economic Opportunity Mass: The Technology Press of MIT and Wiley.

Knopff, R.
1986 "On Proving Discrimination: Statistical Methods and Unfolding Policy Logic." Canadian Public Policy Vol.12, No.4, pp.573-583.

Kutner, B., C. Wilkins and P. Yarrow
1952 "Verbal attitudes and overt behaviour." Journal of Abnormal and Social Psychology Vol.47, pp.649-652.

Lampkin, L.
1985 "Visible Minorities in Canada." in Abella, Judge R. Research Studies of the Commission on Equality in Employment Ottawa: Ministry of Supply and Services Canada, pp.649-683.

Lockwood, D.
1966 The Blackcoated Worker London: George Allen & Unwin Ltd..

Lowe, G.
1980 "Women, Work and the Office: The Feminization of Clerical Occupations in Canada, 1901-1931." in Boag, V. and A. Fellman(eds.) Rethinking Canada Toronto: Copp Clark Pitman, pp.107-122.

Luxton, M.
1980 More Than a Labour of Love Toronto:The Women's Press.

MacDonald, D.
1984 Report of the Royal Commission on the Economic Union and Development Prospects for Canada Ottawa: Minister of Supply & Services Canada, Vol.2.

Marchak, P.
1973 "Women Workers and White Collar Union." Canadian Review of Sociology and Anthropology Vol.10, No.2, pp.134-147.

Marshall, R.
1974 "The Economics of Racial Discrimination: A Survey." Journal of Economic Literature Vol.12, No.3, pp.849-871.

McGregor D.
1978 "An Uneasy Look at Performance Appraisal." in Bolar M.(ed.) Performance Appraisal New Delhi: Vikas Pub., Ltd., pp.19-29.

McNally, F.
1979 Women for Hire London: MacMillian Press Ltd.

Menzies, H.
1981 **Women and the Chip** Montreal: The Institute for Research on Public Policy.

Mills, C. W.
1965 **White Collar** New York: A Galaxy Book.

Mills, D.
1985 "Seniority versus Ability in Promotion Decisions." **Industrial and Labor Relations Review** Vol.38, No.3, pp.421-425.

Mincer, J. and H. Ofek
1982 "Interrupted work careers: depreciation and restoration of human capital." **Journal of Human Resources** Vol.17, No.1, Winter, pp.3-24.

Mincer, J.
1974 **Schooling, Experience, and Earnings** New York: National Bureau of Economic Research.

Mincer, J. and S. Polachek
1974 "Family Investments in Human Capital:Earnings of Women." **Journal of Political Economy** Vol.82, No.2, Part II, pp.S76-S108.

Mincer, J.
1971 "On-the-Job Training: Costs, Returns, and Some Implications." in Kiker, B.(ed.) **Investment in Human Capital** Columbia, South Carolina: University of South Carolina Press, pp.279-323.

Miner J. and M. Miner
1973 **Personnel and Industrial Relations** New York: MacMillan Pub.

Muszynski L. and J. Reitz
1982 **Racial and Ethnic Discrimination in Employment** Toronto: Social Planning Council of Metropolitan Toronto, Working Paper #5.

Olson, M. Jr.
1965 **The Logic of Collective Action** Cambridge Mass.: Harvard University Press.

Ontario Women's Directorate
1986 **Immigrant and Visible Minority Women in Ontario: Employment Issues** Toronto.

Oppenheimer, M.
1985 **White Collar Politics** New York: Monthly Review Press.

Osberg, L.
1971 **Economic Inequality in Canada** Toronto: Butterworth & Co. Ltd.

Osterman, P.
1984 "White-Collar Internal Labor Markets." in Osterman, P.(ed.) **Internal Labor Markets** Cambridge Mass: The MIT Press, pp.163-189.

Parnes, H.
1954 **Research on Labor Mobility** New York: Social Science Research Council.

Pennings, J.
1970 "Work-Value Systems of White Collar Workers." **Administrative Science Quarterly** Vol.15, pp.397-405.

Phelps, E.
1972 "The Statistical Theory of Racism and Sexism." **American Economic Review** Vol.62, No.4, pp.659-661.

Phillips, R.
1985 "Equity in the Labour Market: The Potential of Affirmative Action." in Abella, Judge R. **Research Studies of the Commission on Equality in Employment** Ottawa: Ministry of Supply and Services Canada, pp.49-111.

Pigors, P. and C. Myers
1965 **Personnel Administration** Toronto: McGraw-Hill Book Company.

Piore, M.
1975 "Notes for a Theory of Labor Market Stratification." in Edwards, R., M. Reich and D. Gordon(eds.) **Labor Market Segmentation** Toronto: D.C. Heath and Company, pp.125-150.

Piore, M.
1971 "The Dual Labor Market: Theory and Implications." in Gordon, D.(ed.) **Problems in Political Economy** Toronto: D.C. Heath and Company, pp.93-97.

Piore, M.
1970 "Jobs and Training." in Beer, S. and R. Barringer(eds.) **The State and the Poor** Cambridge Mass.: Winthrop Pub. Inc., pp.53-83.

Polachek, S.
1975 "Differences in Expected Post-School Investment as a Determinant of Market Wage Differentials." International Economic Review Vol.16, No.2, pp.451-470.

Porter, J.
1965 The Vertical Mosaic Toronto: University of Toronto Press.

Prandy, K., A. Stewart and R. Blackburn
1982 White-Collar Work Bath: MacMillian Press Ltd.

Reich M.
1978 "Who Benefits From Racism? The Distribution Among Whites of Gains and Losses From Racial Inequality." Journal of Human Resources Vol.13, No.4, pp.524-544.

Reich, M., D. Gordon and R. Edwards
1973 "A Theory of Labour Market Segmentation." American Economic Review Papers and Proceedings Vol.63, No.2, pp.359-365.

Reitz, J., L. Calzavara and D. Dasko
1981 Ethnic Inequality and Segregation in Jobs Toronto: Centre for Urban and Community Studies, Research Paper No.123, Ethnic Pluralism Paper No.3.

Riddell, C.
1985 "Work and Pay: The Canadian Labour Market." in Riddell, W.(ed.) Work and Pay: The Canadian Labour Market Toronto: University of Toronto Press. Part of The Report of the Royal Commission on the Economic Union and Development Prospects for Canada.

Roemer, J.
1979 "Divide and conquer: microfoundations of a Marxian theory of wage discrimination." Bell Journal of Economics Vol.10, pp.695-706.

Rosen, S.
1972 "Learning and Experience in the Labor Market." Journal of Human Resources Vol.7, No.3, pp.326-342.

Rosenbaum, J.
1984 Career Mobility in a Corporate Hierarchy London: Academic Press, Inc..

Sandell, S. and D. Shapiro
1978 "An exchange: The Theory of Human Capital and the Earnings of Women." Journal of Human Resources Vol.13, No.1, pp.103-117.

Sawhill, I.
1973 "The Economics of Discrimination Against Women: Some New Findings." Journal of Human Resources Vol.8, No.3, pp.383-395.

Schutz, T.
1971 Investment in Human Capital New York: Free Press.

Schwartz, E.
1971 The Sex Barrier in Business Atlanta: Georgia State University.

Seidman, A.
1978 Working Woman: A Study of Women in Paid Jobs Boulder: Westview Press, Inc.

Seydegart, K. and G. Spears
1985 Beyond Dialogue: Immigrant Women in Canada 1985-1990 Toronto: Erin Research Inc..

Smith, D.
1976 The Dual Labour Market Theory: A Canadian Perspective Kingston: Industrial Relations Centre Queen's University Research and Current Issues Series No.32.

Smith, J.
1979 "The Convergence to Racial Equality in Women's Wages." in Lloyd, C., E. Andrews & C. Gilroy(eds.) Women in the Labor Market New York: Columbia University Press, pp.173-215.

Smith, M.
1989 "What is the Effect of Information Technology on the Organization of Office Work and Why?" Society in Press.

Stiglitz, J.
1973 "Approaches to the Economics of Discrimination." American Economic Association Vol.63, No.2, pp.287-295.

Stone, K.
1975 "The Origin of Job Structures in the Steel Industry." in Edwards, R., M. Reich and D. Gordon(eds.) Labor Market Segmentation Mass: D.C. Heath & Company, pp.27-84.

Tepperman, J.
1976 **Not Servants, Not Machines** Boston: Beacon Press

Thurow, L.
1975 **Generating Inequality** New York: Basic Books, Inc., Pub.

Thurow, L.
1972 "Education and economic equality." **The Public Interest** No.28, Summer, pp.66-81.

Thurow, L.
1969 **Poverty and Discrimination** Washington, D.C.: The Brookings Institution

Tiffin J. and E. McCormick
1962 "Industrial Merit Rating." in Whisler, T. and S. Harper(eds.) **Performance Appraisal** New York: Holt, Rinehart and Winston, pp.4-7.

Training Department of Hawthorne Works Western Electric Company
1962 "The Nature and Interpretation of Employee Merit Ratings." in Whisler, T. and S. Harper(eds.) **Performance Appraisal** New York: Holt, Rinehart and Winston, pp.21-27.

Treiman, D. and H. Hartmann(eds.)
1981 **Women, Work, and Wages: Equal Pay for Jobs of Equal Value** Washington: National Academy Press.

Treiman, D.
1979 **Job Evaluation: An Analytic Review** Washington, D.C.: National Academy of Sciences.

U.S. Bureau of Labor Statistics
1970 **Seniority in Promotion and Transfer Provisions** Washington: U.S. Department of Labour, Bulletin 1425-11, March.

Wallace, P., L. Datcher and J. Malveaux
1980 **Black Women in the Labor Force** Cambridge, Mass: MIT Press.

Watson, G.
1966 **Social Psychology: Issues and Insights** New York: Lippincot Co.

Weinfeld, M.
1985 "Don't Cry Wolf." **Policy Options** Vol.10, No.6, pp.32-35.

Weiss, R.
1970 "The Effect of Education on the Earnings of Blacks and Whites." Review of Economics and Statistics Vol.52, pp.150-159.

Welch, F.
1973 "Black-White Differences in Returns to Schooling." American Economic Review Vol.63, No.5, pp.893-907.

Wellbank, H., D. Hall, M. Morgan and W. Hamner
1978 "Planning Job Progression for Effective Career Development and Human Resources Management." Personnel Vol.55 No.2, March-April, pp.54-64.

Wilson, S.
1982 Women, The Family and The Economy Toronto: McGraw-Hill Ryerson Ltd.

Wolfenden, H.
1954 Population Statistics and Their Compilation Chicago: University of Chicago Press.

Wright, E.
1978 "Race, Class and Income Inequality." American Journal of Sociology Vol.83, No.6, pp.1368-1397.

Yates, F.
1960 Sampling Methods for Censuses and Surveys London: Charles Griffen & Co. Ltd.