Occupational Prestige of Canadian Professions in the New Economy

by

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I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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Abstract

Canadian professions have, paradoxically, lost prestige at least in a relative sense, despite being the prototype for the expanding new economy. The early 1990s saw a transition from the old economy to a new economy emphasizing a highly educated and knowledge-focused workforce that values flexibility, innovation and risk. Professions exemplify the knowledge-intensive and education-centered traits emerging in the new economy particularly well.

This research examines factors that influenced changes in the prestige ratings of professions during the 40-year period between 1965 and 2005. Occupational prestige and census data collected in 2005 are used to measure the impact of changes in education, income, and the gender composition of professions on the prestige levels. Abbott's "professional purity" thesis is also used to examine the effects of people-complex versus data-complex practices on prestige ratings. The influence of rater characteristics is also examined in terms of prestige allocation to professions. Finally, using a lawyer survey, the prestige associated with areas within the legal profession is examined in a study of internal stratification.

Professions experienced a relative gain in occupational prestige over this 40 year period; however, professions did not gain as much in comparison to all occupations. In predicting 2005 occupational prestige between 1965 and 2005, the change in income, data and people-complex tasks, gender of incumbents, and the gender of the rater all impact the prestige that professions receive. Women's increase in numerical representation within professions increases the 2005 prestige ratings of professions. In predicting 2005 prestige, female raters attributed significantly more and male respondents attributed significantly less prestige to professions. Gender significantly predicted the level of law an individual practiced and the distribution of gender across specializations also suggests that the legal specializations where many women work are less prestigious than men's specializations.

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1. Introduction

> In the United States professions are more or less laborious, more or less profitable; but they are never either high or low: every honest calling is honorable.
> -Alexis de Tocqueville, *Democracy in America*

The belief that each occupation or profession is honourable makes for a nice folk myth, but the reality is that the perception of the prestige of each occupation has been shown to differ among individuals. The purpose of this research is to investigate why Canadian professions have, paradoxically, lost prestige at least in a relative sense, despite being the prototype for the expanding new economy.[1] Exploration into this research will identify which professions have lost the most prestige, offering an explanation for this loss, and assessing the implications of this loss of prestige. The legal profession is examined in some detail as an example of the internal stratification of prestige distinctions that occur within a profession because not all professions have equal prestige even within the narrow bands of professions.

1.1 The New Economy

The early 1990s saw a transition from the old economy to a new economy. The new economy refers to a time of huge economic growth with very low inflation. It emphasizes a highly educated and knowledge-intensive workforce placing significance on flexibility, innovation and risk, all correlating with new technologies allowing for practically effortless global communication (Carnoy, 2000:1). This new economy is an important transition for all occupations; however professions exemplify this shift particularly well. The traits emerging in the new economy are often shared with those of professions. Professions are important to the

[1] All subsequent references to professions losing occupational prestige are relative. The majority of professions did increase in prestige between 1965 and 2005. However, this increase is much smaller than the increase in prestige experienced by all occupations and as such, professions have a relative loss in prestige by this comparison.

new economy because of their emphasis on knowledge and higher education, or what is referred to as the "knowledge economy." Researchers who have studied work and occupations have grappled with definitions of a profession; however, there is a general consensus that, at the very least, professions are formed and operate based on higher education and esoteric knowledge (England 1979; Freidson 2001; Pavalko 1971; Rossides 1998; and Rothman 1998). In the new economy, an occupation based on technical and rarefied knowledge should result in higher prestige. Professionals fit the archetype of this new economy very closely and an examination of how they have fared through this transition will reveal the influence of the new economy on society. It could almost be said that to track the changing prestige of professions is to track the prestige of the new economy. Professions make an appropriate vehicle for studying changes in prestige because they are well-defined.

The new economy has brought about two differing opinions about work. The first is the idea that new technology will result in fewer jobs as technology replaces workers and for those workers who remain, the new technology will deskill their work. This argument can be traced to Braverman's (1974) deskilling argument where technology takes away control held by the worker, even extending so far as the white-collar workers who are chained to their computers and personal digital assistants (PDAs). Heather Menzies (2005) echoes this deskilling and depersonalizing of work theory where she describes a pattern in which there is no longer a human element to work and technology has created a "digital divide" that separates the rich, or those who control technology, and the poor, those who are controlled by technology in their work.

The opposing argument is that this new technology generates more jobs and increases productivity in existing jobs, creating new products and services. This view argues that new

technology generates greater demand for more and different products. Further this ability to increase productivity allows for new products that are affordable for the average consumer (Carnoy 2000:15). Carnoy thus views technology and knowledge as the means to generate more jobs and increase the use of knowledge. The basic equation is that more output will result in more employment. This argument is reflective of Bell's (1973) focus on "knowledge jobs" where technology and knowledge would replace the need for employment in basic production, allowing for workers to use a more knowledge-centered approach to work and production. Essentially, technology and knowledge are replacing very routine and monotonous tasks with work that requires the "human element" to function and allows individuals to be the "brain" behind the computer or machinery.

More recently, Tapscott and Caston (1993) wrote that organizations, businesses and individuals must make the transition to the new technology, embracing information technology to succeed. Technology is described as opening up opportunities for organizations, businesses and individuals to change the way they live, work and communicate (Tapscott and Caston, 1993). In a later book, Tapscott (1996:294-5) describes how technology, especially the Internet, allows individuals to access knowledge, markets and particular leadership roles without being judged or evaluated on their gender or racial/ethnic status. Further, technology has opened up the doors for those who remain at home to stay connected and also offers the opportunity to earn an income from home (Tapscott 1996:296). According to this argument, technology and the new economy are the great equalizers.

An example of this optimistic view is the speech in the fall of 2006 by David Johnston (*The K-W Record* 2006), University of Waterloo president, containing ten goals to lead Waterloo Region to becoming the "Knowledge Capital of Canada". This speech contains examples of the

new economy's requirement for increased knowledge; the world's 'knowledge economy' is a critical feature of the new economy. Johnston (*The K-W Record* 2006) believes that Waterloo Region should have the "highest concentration of PhDs per capita in the country" in order for the region to exceed the knowledge base of competing areas of the country. Innovation should include "research and development, higher education, [and] advanced manufacturing." Government tax legislation should also be more lenient on any think tanks that choose to locate in the region (*The K-W Record* 2006). These are aggressive goals and their features match those of the new economy, and similarly, the characteristics attributed to professions.

It is not surprising that a university would promote higher education, increased knowledge and innovation. It is probably not a surprise that Waterloo was named the "world's top intelligent community" by New York-based Intelligent Communities Forum (ICF) when 40 percent of high-tech firms existing in the top seven cities that comprise "Canada's Technology Triangle," are based in Waterloo (Pitts 2007). What is interesting about this honour is that it is considered and acclaimed to be a *community* achievement. This label implies that the increase in characteristics representative of the new economy will permeate into those living within Waterloo Region and those outside this area will also be aware that these characteristics exist within this region. As a result of this infiltration and expectation, citizens will increase the prestige they attribute to professions because they view new economy characteristics as essential to a community's success and leadership. Although the emphasis is on higher technology, innovation and education, all of which can be found at the university level, this achievement encourages all citizens, within and outside Waterloo to garner a greater respect for and contribute to this greater knowledge. The new economy clearly speaks to those with the education, skills and time to contribute to the 'knowledge capital' being built. However, it ultimately affects the

entire community (the people studied in occupational prestige studies) and this new economy sets the precedent for those who fit the respected mould.

1.2 Prestige as a Key Measure

The intention of this research is to draw attention to the fact that individual subjective evaluations are of importance to both societal and individual worth. As de Botton (2004: viii, 6) suggests, "we rely on signs of respect from the world to feel tolerable to ourselves" and with status comes love, something that all humans want.

Despite a decreased interest in occupational prestige measures by some researchers, this area remains important not only to work and occupational literature and research, but also, the individuals who experience the consequences of these prestige differences. By taking a prestige-focused approach, rather than simply measuring income or education, the findings will tell a story of public perception. Focusing on prestige is a subjective research approach, rather than an objective approach (see, for example, Centers, 1949:21). This subjective approach focuses on the uniqueness of the public's perception or awareness of professions in the context of this new economy.

While the research will use objective measures such as income, education and gender to help identify the type of respondents who are more or less generous with prestige, the focus is on the subjective ratings of professions. This research recognizes that many of the respondents may have utilized an objective measure, such as income or level of education to determine a profession's prestige rating, but the idea is that each individual chooses what tools he or she uses to determine the worth of an occupation.

Objective measures such as income of professions are sufficient to provide a rough scale of the prestige awarded to professions, but allowing the public to subjectively determine their

perception of professions gives a unique opportunity to fill in, to some extent, the true image, respect or value they place on professions today. This worth of professions may have shifted over time for individuals. Individuals today, compared with earlier times, may not have the same perspective on professions, or the same reliance on professions due to the impact of technology within the new economy. Pineo and Porter (1967:34) observed how public occupational evaluation "is a subjective phenomenon experienced by actors in a social system." The relationship between prestige, income and education measures suggests that subjective measures of occupational prestige have real consequences.

One notion of the way in which prestige is determined is expressed by Donald Treiman's (1977:5) observation that, "the division of labor gives rise to characteristic differences in power, and power begets privilege, and power and privilege beget prestige…" Power can be measured to some degree by an individual's location in an occupation hierarchy based on the number of subordinates and independent decision-making. Privilege is also measurable if income, material goods and entrance to particular arenas of life (for example, clubs, societies, boards, etc.) for instance, are added together. Prestige, however, is not as easily measured. Prestige is carried by individual minds and societal traditions and expectations. This idea of prestige being carried by individual minds is key to the research on professional prestige.

Michael Young (1958:71), in his satire *The Rise of Meritocracy*, identifies how individuals who are not of high status are punished not only in terms of finances and the freedom to make choices, but "to the injury of poverty, a meritocratic system now added the insult of shame." Those individuals without the opportunity to acquire higher education, typically required of the professions, not only bear the financial burden, but also the indignity of not having the power or privilege to choose. Once a particular subset of the population is guided into

the professions, these individuals have increased control over the access and regulation of their esoteric knowledge and resources. As Hunter and McKenzie Leiper (1993:24) explain, "various educational credentials indicate socialization to a particular class, elite, or occupational subculture, giving those who possess them preferential access to occupations controlled by carriers of that subculture." Despite greater dissemination of professional knowledge, the public must still go through professional channels to ultimately satisfy their needs.

The importance of using this subjective approach, explained through W.I. Thomas' (Thomas and Thomas 1928: 572) famous words "if men define situations as real they are real in their consequences," speaks to the framework of my research. Individual perception creates or takes away prestige and throughout it all, the manner in which this prestige is defined by individuals or the public will ultimately determine how they experience the new economy, the professions and their reaction to the interaction of the two.

1.3 The Prestige of Professions

As noted, professions generally fit the archetype of the new economy with their high education and knowledge-based work. Carnoy (2000) also found that the number of individuals entering professions had increased, indicating high demand for professional services. If the new economy prevails, professions should have increased in prestige over time. The anomaly found by John Goyder (2005) is that in the occupational prestige distribution of the 25 years between 1975 and 2000 there has been a general decrease in the prestige of typically higher-prestige occupations, including the professions, and an increase in the prestige of typically lower-prestige occupations. If professions align so well with the characteristics of the new economy, why are they losing prestige? The close link between the attributes of the new economy and professions

imply that this slip in professional prestige can shed light on the new economy's influence on society, its well-being and future.

An objective of this research is to attempt to delineate if gender composition has contributed to declines in the prestige of professions even as society becomes more knowledge and technology based. The research also aims to investigate how Abbott's (1988) "professional purity" concept influences people-complex versus data-complex professions on prestige. Abbott's (1988) "professional purity" thesis is based on the idea that professions are organized around their own knowledge, which is unshared with the general public, and they avoid speaking in terms or performing tasks outside of their area of work. This practice maintains their elite status and prevents them from having to explain their professional jargon on a more simple level, thereby taking up more of their time. Abbott's (1988) thesis is valuable in this exploration because of women's typical involvement with people-complex professions. These professions may require a greater amount of time, energy and explanation to connect with individuals, without the ability to eliminate interpreting or decoding professional jargon to clients. This could lead to limited mobility and career advancement for women professionals.

Prestige surveys examining a set of occupations do not differentiate levels within professions. This internal stratification should be considered in the present study of gender composition and prestige. There have been dramatic changes within the legal profession since 1965 which makes it a good case study for exploring the internal stratification as it relates to occupational prestige. Women did not enter the legal profession in Canada until around 1970 and major shifts in gender representation occurred in the 1980s where women comprised 30 percent of the legal profession (The Canadian Bar Association 1993:47). Men and women are now almost equally represented in the profession. Two major differences that follow the line of

gender are partnership and type of legal specialization. In 1990, 33 percent of men and only 13 percent of women in the legal field were partners and these percentages rose to 63 percent of men and 35 percent of women by 2003 (Kay, et al. 2004:20; Kay et al. 2006:217). In 2003, women were much more likely to practice family law and other fields (including aboriginal rights, adjudication/mediation, constitutional law, debtors' and creditors' rights, human right and *Charter*, landlord and tenant, and legal policy work) while men were more likely to practice real estate and civil litigation (Kay, et al. 2006:212). Practicing family law is challenging due to low prestige, limited advancement or promotional opportunities and limited resources (The Canadian Bar Association 1993:203,207). One woman family lawyer comments on the unique challenges of her field, "family law has lower status because it is less lucrative, very time consuming, and emotionally draining…" (The Canadian Bar Association 1993:204). Reflecting on the status of family lawyers, one woman describes how "the senior lawyers in my firm do not respect my practice. My firm just expects the women to take the family cases…" (The Canadian Bar Association 1993:204). These dramatic shifts in representation and clear specialization boundaries that limit prestige, advancement and power call for the exploration of gender effects on internal stratification and ultimately prestige in the legal field.

Exploring the legal profession in greater depth allows for a better understanding of how a simple professional title, such as "lawyer," can disguise many inconsistencies in power, privilege and prestige occurring within the internal stratification of the profession. For example, corporate lawyers work with clients who are very powerful and knowledgeable in the legal process, whereas family lawyers often work with individuals who are unfamiliar with the legal process and require greater explanation. This research will examine the possibility that gender plays a notable role in the distribution of prestige among lawyers.

Aside from helping to understand the new economy, this exploration is relevant for both professionals and the public. A decline in such long-standing prestige may be a source of stress for professionals who have typically relied on their esoteric knowledge, autonomy, and monopoly to surpass the power, privilege and prestige of the general public. Alain de Botton (2004: vii) identifies what may be considered the opposing feeling of having high status as "status anxiety" which he describes as:

> "a worry, so pernicious as to be capable of ruining extended stretches of our lives, that we are in danger of failing to conform to the ideals of success laid down by our society and that we may as a result be stripped of dignity and respect; a worry that we are currently occupying too modest a rung or are about to fall to a lower one."

On the other hand, this loss of prestige may open new doors of opportunity to the public as they become more privy to, what was once, very carefully held professional knowledge. This dissipation of knowledge gives the public a greater awareness and autonomy over the choices influencing the direction of their own lives.

1.4 Research Questions

Specific research questions to be investigated in the following pages mainly relate to professional prestige change occurring between 1965 and 2005. Using census and occupational prestige data (not the lawyer survey), objective measures in the change of education and income of respondents' prestige scores will be measured. An inquiry into the changes in the percentage of women entering professions between these two time periods, the tendency to perform more data or people-complex work, and whether this change has had a significant impact on professional prestige will contribute to our understanding of prestige shifts. Then, using the *Chicago Lawyers Survey, 1994-1995* supplied by the Inter-university Consortium for Political

and Social Research I will examine the prestige associated with areas within the legal profession to be investigated more thoroughly in a case study of internal stratification.

From this brief explanation of the importance of the new economy to public perception and to professions, the chapters to follow will outline each of these ideas and build on one another to reach an understanding of what is happening to professional prestige in the new economy. Chapters two and three contain a literature review of occupational prestige, professions, and gender research. Chapter four outlines the methodology and data used in the analysis and how it was combined to show both changes in professions' prestige and the demographics of those individuals allocating prestige to professions. Chapter five will be devoted to professional-title analysis prestige changes and Chapter 6 to respondent-level prestige changes, including how the proportion of women influences ratings. These chapters will show the prestige shifts in professions and identify those people who assign higher or lower prestige scores to professions within a 40-year period. Chapter seven will provide a look into the legal profession, giving an opportunity to examine the internal stratification of one particular profession. A summary of all of the findings, the importance and relevance of this work to related literature and potential future research that may supplement these findings will conclude this work.

2. Contextualizing the Research, Part I: Occupational Prestige and Professions

> "We need to rid ourselves of any concepts which keep us from seeing that the essential problems of men at work are the same whether they do their work in the laboratories or some famous institution or in the messiest vat room of a pickle factory."
> (Everett Hughes 1971:417)

2.1 Evolution of Occupational Prestige: Ranking Organization

Early occupational scale conception and construction is conceptually rooted in structural functionalism. An occupational role was considered to represent all those within an occupation; the idea that "you are what you do." According to Davis and Moore (1945:242), the "system of positions, not to the individuals occupying those positions," was essential to understanding societal functioning. Rewarding positions unequally, based on their relative functional importance and intensity of training was believed to attract to occupations individuals with varying levels of training. Davis and Moore (1945:242-4) insisted that stratification was functionally necessary to ensure that all needs were fulfilled in society by rewarding positions unequally, based on their relative functional importance and intensity of training.

One of the first studies related to socioeconomic status was George S. Counts' review of the social standing of the teaching profession. This study had mainly high school students rank order 45 occupations (Counts 1925)[2]. This basic evaluation forms the concept for future studies of organizing occupations by rank. In 1940, Alba Edwards organized occupations, including skill

[2] Although this was a commendable first attempt to identify occupational social status, Counts' study suffers from several methodological problems. Some of these concerns include: too many occupations for high school students to logically rank, a restricted and unrepresentative group performing the ranking task, and a vague ranking request that did not specify whether the occupations were to be ranked and reflect the general public's opinion or the individual's personal evaluation (Counts 1925:18-19; Hauser and Warren 1997). These methodological difficulties present issues of scale validity that reappear in future status and prestige studies.

level within occupations, by using occupational education and income census data, as well as "manual" and "non-manual" distinctions to derive 13 levels (Coover 1977:446-7). Integration of skill level within occupations proved to be a lasting classification method as it appears in later scales, for example, Canadian Human Resources and Skills Development Canada's National Occupational Classification (NOC). The primary criticism of Edwards' scale is that the educational and income characteristics of incumbents within levels are too broad, resulting in inaccurate or vague categories (Coover 1977; Mueller and Parcel 1981). Heterogeneous occupational categories continue to pose an ongoing validity problem within socioeconomic status and prestige measures. Vague occupational category distinctions lead to poor estimates of individual occupations' status or prestige and this is a challenging difficulty to rectify.

The structural-functionalist footprint is clearly seen in the 1947, Cecil North and Paul Hatt study under the National Opinion Research Center (NORC) examining occupational prestige. As a purely subjective rating system of occupational prestige, this study has been imitated in later prestige-based studies and served as a complement to socioeconomic scales. Occupational raters were asked for their "personal opinion" of each occupation's standing (Nakao and Treas 1994:3). Raters were instructed to attribute a rating to each of 90 occupations from a five-point scale ranging from "excellent" to "poor" (Coover 1977:445). Bias of occupations included within the rated sample and gender-based wording of occupational titles has unfortunately led to difficulties in replicating this work (Nakao and Treas 1994; Reiss 1961). Bias and datedness prevents these early scales from being an entirely valid representation of occupational prestige.

Bernard Blishen has been one of the most prominent figures in Canadian occupational socioeconomic status measures working from an objective approach. His original 1951 scale has

been revised several times to accommodate changing societal and occupational structures, including incumbent composition. The scale ranked 343 occupations into seven classes based on average income and education from the 1951 Census (Blishen 1958). It is clear in Blishen's (1958:520) scale that he was theorizing from a structural functionalist perspective when he described how "every society has a system of positions through which its activities are carried out. Some of these positions are functionally more important to the society than others, depending on the type of society." His further emphasis on the functionalist perspectives of Davis and Parsons and the value of roles to society exemplified this point of view. Blishen (1958:524) stated that "the more skill required by an occupation, the greater its prestige and thus the higher the social position of the person in such an occupation." In this case, the occupational role is viewed as a category of skill. The influence of individual traits is not considered in this ranking, but rather, categories are based solely on the required skill, regardless of any potential gendered, ethnic or racial bias. Blishen (1958:520) explained that "the activity of each member of the social system is evaluated and rewarded in terms of its contribution to the effective functioning of the systems which ranks individuals relative to one another." Ralph H. Turner (Jonathan Turner 1991:439), describes how functionality's "concern is with creating and differentiating roles in an efficient division of labor that gets things done." This indicates that success and efficiency, not unique personal characteristics, are essential in determining if a role is functionally useful.

One potential validity problem is that the intervals between classes are arbitrarily divided, as Blishen used his *judgment* to prevent the inclusion of "high" and "low" occupations in the same class (Blishen 1958). This is also potentially a reliability issue if others do not make the same class distinctions. Blishen would later create his socioeconomic index by comparing with

and utilizing the 1967 Pineo-Porter occupational prestige scale. Blishen's scales have been widely used; however, their popularity has declined over the past two decades, indicating that the data on which the scales are based may no longer be relevant in contemporary socioeconomic status studies (Goyder and Frank 2005:3).

In 1961, Otis Dudley Duncan developed a socioeconomic index for all of the 1950 United States census occupations. This socioeconomic index presented the opportunity to predict a combined prestige and status score for unlimited occupations, using a proxy, provided income and education information were available. Using the 45 occupations that matched those in the North-Hatt NORC study, Duncan (1961:114) regressed occupational prestige scores (percentage of "excellent" and "good" ratings given to occupations) onto the income and education census data, producing weights to predict status for the remaining census occupations. The result was not a prestige scale but a substitute for prestige, an index based on socioeconomic factors weighted by prestige scores. Confidence in the index's validity was due to a high correlation between the index and prestige scores. The assumed validity of this correlation stemmed from the 60 percent of NORC raters who indicated that income, prestige, education and value to society were considerations in their ranking (Siegel 1971:4). Duncan's index has become the template for many future scales and indexes because of its "higher criterion validity" (Hauser and Miech 2000:75).

Validating prestige and socioeconomic status scales with one another introduces the recurring question of scale validity because these variables are not identical in their components and using one imperfect scale to assess another does not prove one scale's authority over another. In addition, concerns about the influence of the NORC's unrepresentative occupational sample and biased wording (i.e. gendered occupations) create doubts about the validity of the

Duncan socioeconomic index. Duncan (1961:116-7) described the configuration of the "functionally related" relationship among income, education and occupation, by emphasizing that "if we characterize an occupation according to the prevailing levels of education and income of its incumbents, we are not only estimating its 'social status' and its 'economic status,' we are also describing one of its major 'causes' and one of its major 'effects'." By determining social status, scales can then predict economic well-being and power. This relationship can still be seen today where in the new economy status increases wealth and influence. Discussions of socioeconomic status disregarded the individual incumbent characteristics, and describing an individual's occupational role was considered a meaningful representation of his or her status.

Peter Pineo and John Porter's 1965 occupational prestige ranking was the first national Canadian study of its kind. Primarily based on the 1964 NORC study, Pineo and Porter (1967) asked adults to rank occupations by organizing cards onto a ladder of "social standing" with nine levels (see Appendix A). This exercise identified a national prestige agreement among raters (Pineo and Porter 1967:29). Although success was associated with achieving this apparent national pattern, there was concern about the legitimacy of the national-level consensus. There was a question of whether Canadians and specific occupational categories might "rate all jobs systematically higher than Americans do, suggesting that, within that group, work itself has a greater prestige" (Pineo and Porter 1967:31). It was unclear whether the occupational rankings were a true reflection of how Canadians viewed the prestige of individual occupations or whether the entire scale was inflated beyond the rankings that other countries may assign to work in general. This uncertainty remained at the aggregate level and was concerned with exaggerated occupational role prestige, not with exaggerated individual intra-occupational prestige.

Confirming a functionalist perspective, Pineo and Porter (1967:31) assumed that increasing industrialization would produce an increase in the prestige of highly developed and mechanized occupations, and they described this as "functionally appropriate to provide a fit between the value system, the motivation of actors and socialization to occupational roles in a more complex economy." Occupational roles were acknowledged and valued based on their function to society and how well they complied with societal values. We still see this method of valuing occupations evident high status in the attributed to physicians because they heal and save lives, a practice that is socially valued.

Further, the suggestion that individuals need to be socialized into an occupational role relates to Ralph H. Turner's (Jonathan Turner 1991:429) conception of role theory where individuals must learn their appropriate class behaviours because "roles are the norms attendant on status positions." Women were socialized into particular occupational roles and as they continue to break out of those and into typically male-dominated occupational roles this will not be the norm and may influence the occupational status. As it becomes more common to see women in roles usually held by men, the behaviours and status associated with particular roles will no longer be linked to gender but rather to skill. The conceptual use of occupational role had meaning with Pineo and Porter's prestige scale because occupations were assumed to be appropriately rewarded based on how well their function agreed with society's expectations and values. Occupational roles as they have traditionally been viewed may no longer be meaningful. The new economy may shift societal values and result in changed prestige allocations.

The Pineo-Porter prestige rankings have a measurement validity issue unique to subjective evaluations. When conducting the study, the raters were not given a definition of "social standing," leaving it open to interpretation (Pineo and Porter 1967:28). This purely

subjective measure had no grounding in a concrete criterion, and therefore, was vulnerable to the ambiguous definition of social standing and societal influences of appropriate gender roles. High correlation between the subjective and objective concepts resulted in the researchers insisting that both should be included in stratification research (Pineo and Porter 1967:34). Despite having no definition, the prestige results showed similar rankings with those using objective indices, and so Pineo and Porter assumed a strong societal consensus. In my research, I want to see if there is a common understanding regarding the gender shifts in professions' gender representation.

Occupational prestige scales incorporate a subjective element because they utilize public opinion. As seen, raters are asked to rank occupations but are not given any criteria by which to do so, leaving ranking open to interpretation. Pineo and Porter (1967:34) justify the inclusion of this subjective element by explaining how utilizing public occupational evaluations "is a subjective phenomenon experienced by actors in a social system. Prestige ratings were found to include objective socioeconomic considerations, but also included industrial skill category judgments that were based on 'moral worth, value to society, etc.' (Goyder and Frank 2005:20). Goyder and Frank insisted that "income and education for occupations is partly socially defined," and therefore rater bias and disagreement must be included in prestige studies. This societal agreement or disagreement may overlook any individual discrimination or inequality occurring within occupations.

Public evaluations ultimately reflect the necessary and demanded efficiency of societal functioning, not simply the result of individual evaluations but societal expectations and values, "when the costs and rewards associated with roles are consensually valued, incumbency in roles will reflect the distribution of power in the broader social context" (R.H. Turner 1991:444). A functional structure has already been laid in which individuals learn, exist and relate based on

functional importance and efficiency. As society is introduced to new gender norms this may influence how women in professions are viewed, perhaps leading to a consensus through a desire to change the structure of functional importance of professions regardless of incumbent characteristics.

Concurrently with the Pineo-Porter article, Blishen published a revised index which incorporated the Pineo-Porter prestige scores with 1961 Canadian census data. Similar to Duncan's index method, Pineo-Porter prestige scores were regressed onto 88 matching census occupations' income and educational attributes, to produce weights (Blishen 1967:42). These weights were then used to score census occupations. The 1951 and 1961 rankings were highly correlated, however Blishen's (1967:43) revised index was unrepresentative of the population, excluding women, farmers, clergy and several obscure occupations from its scores. The exclusion of women was a result of their low labour force participation rates. A further revision using 1971 data was still based on the male labour force but made adjustments to increase the income cutoff (from $5000 to $6500) and specificity of educational cutoffs (based on province) allowed for greater accuracy (Blishen and McRoberts 1976:71-72). The 1971 index had a lower regression value and larger standard error with the occupations in the 1971 census; however, when the original 88 occupations from 1961 were matched with those from 1971, the 1971 index had a higher correlation and a better fit (Blishen and McRoberts 1976:72). Blishen and McRoberts (1976:72) point out that the lower regression and larger standard error in the 1971 index could have been misinterpreted as resulting from income and education declining in status-predicting strength. This example serves as a reminder of the importance of attempting to compare scales that are similarly constructed and recognizing changing occupational titles and

occupational extinction over time. The new economy and technology bring about many new jobs but also make many obsolete.

In 1971 Paul Siegel created the first United States prestige scale for all census occupations using three national samples of raters. Siegel provided occupational prestige scores from three 1964-65 studies that were based on all of the 1960 census occupation titles. The method incorporated prestige scores from: the 1964 Hodge-Siegel-Rossi Study of Occupational Prestige and two 1965 NORC samples (Siegel 1971:20). The scores were weighted based on the labour force and an average score calculated for each occupation, which served as its "social standing" (Siegel 1971:59). Siegel's measure of prestige provided information on the characteristics of those employed in any of the census occupations and where they fitted into the occupational scheme. The distinction between prestige and socioeconomic status is an issue for Siegel's prestige scores. Many researchers argue that raters consider many criteria when "subjectively" rating occupations, such as education and income, and that these do not result in explicit prestige scores, but better reflect socioeconomic status variables (Mueller and Parcel 1981:20). This subjective rating, public perception and the freedom to evaluate individually based on experiences and values are ultimately where the interest and intention of this project lies. All research that works with attitudinal or behavioural measurements is complicated and involves error. Societal and experiential differences influence individuals' views and actions.

2.1.1 Theoretical Shift: the Occupational Incumbent and Influence of Gender

Different socioeconomic scale conceptions can be attributed to variations in researchers' perceived necessity to separate an occupation's role from its incumbents. Initial Canadian scales produced occupational status and prestige entirely independent from the individuals working

within them; the scales paid no attention to the demographics of individuals within occupations (example Pineo and Porter, 1967). From a functionalist perspective, occupational prestige agreement was assumed without examining individual cases within occupations. In the 1980s and 1990s, concerns about differing opinions among public prestige ratings and inconsistent socioeconomic status within occupations were met by more in-depth examinations of occupational incumbents, and especially relevant to my research is the measure of gender.

With continued importance attributed to occupation as a socioeconomic status variable, its role has transformed with Canadian society's attitudinal shifts, and consequently, restructured labour force composition. In the late 1970s through the 1990s a noticeable shift appears in the literature; a greater concern for the attributes of the individuals that compose these large, highly aggregated occupational groups can be observed. During this time, several prestige studies examined the role of incumbent gender in occupational prestige attribution (see Armstrong 1998; Boyd 1975; Boyd 1986; Guppy and Siltanen 1977). More individualistic theoretical approaches gain importance. This shift drew attention to the influence of incumbent characteristics on the socioeconomic status, prestige, and role of occupations.

In examining the status perceptions of high school students, Alexander (1972:772) found that lower-status individuals will lessen the status difference between those of high and low status by raising the status of lower status individuals. The status attributed to an occupation was related to the status position of the individual rating. High-status students identified more grouping differences between high and low-status positions and grouped all lower-status occupations together (from skilled craftsman to private household workers) (Alexander 1972:772). Lower-status students did not identify a major difference between skilled craftsman

and professionals and placed them together in a high-status category (Alexander 1972:772). Higher-status students were more likely to identify status distinctions than lower-status students.

The value of skill is determined by the public based on supply and demand as well as its importance to societal values. Similarly, the decision of who (or which gender) best performs particular tasks has been determined by public values and acceptance. The social construction of skill may influence incumbents' access, remuneration and ultimately their occupational status. This example of the paradigm shift is described by Armstrong (1998:121) where "skill is more socially constructed than it is objectively determined, and the sex of the workers plays an important part in this social construction." These concepts were said by some to be no longer meaningful because their results differed based on which gender, for example, was seen as appropriate for particular occupations.

A census occupational classification is a statement about the prevailing occupational structure. In 1977, Pineo, Porter and McRoberts published a new socioeconomic occupational classification in response to the new codes used in the 1971 Canadian census. Although intended to organize occupations regardless of the incumbents, heterogeneous census categories inspired the researchers to create more meaningful socioeconomic classifications when they stated that "a code cannot be better than the responses which go into it" (Pineo, Porter and McRoberts 1977:92). There were two considerations in the formation of the new coding classification. First, occupations may "have special affinities even if they differ somewhat in social standing" and second, that several skill levels exist within occupational categories (Pineo et al. 1977:96). The inclusion of skill level into occupational classification anticipates the more detailed analysis exhibited in the National Occupational Classification (NOC) that was introduced in 1992. To date, extensive examination of internal stratification within occupations has not been performed.

Overall occupational prestige of professions has declined over the past 40 years, including the legal field. Despite greater numbers of women entering law, we can see through Fiona Kay's ongoing studies (1991, 1995, 2004, 2006) that women experience lower levels of respect, opportunity for advancement, and earnings than their male counterparts. These disparities that are occurring within one profession make it important to look in more depth at the metrics behind high-level title findings. I will take a brief look into the stratification within the legal field and examine the prestige allocated to specializations by lawyers who know the intricacies of law best.

The domination of one gender in an occupation and its absence in others meant that "collapsing and regrouping" of the codes was a necessary step if this new coding scheme was to be useful in tracking women in the labour force (Pineo et al. 1977:100). Researchers admitted to the incompatibility of the new classification with female labour force participation, and their analysis remained purely at the occupational role level. This new occupational prestige organization presented more homogeneous categories than the census, and as a result of more sociologically meaningful groupings and the inclusion of skill level, occupational statuses could be sequenced (Pineo et al. 1977:98). The use of more meaningful groups and skill level did not, however, incorporate the impact of incumbent variations among occupations.

Guppy and Siltanen (1977) focused the occupational prestige literature more clearly by including gender in their occupational prestige comparison. In a study similar to that of Pineo and Porter (1967), Guppy and Siltanen (1977) attempted to understand "whether the sex of the worker has an effect upon the amount of prestige that others grant to the worker's occupation" (Guppy and Siltanen 1977:320). Guppy and Siltanen's work piqued my interest in possible differences in prestige when individuals rate either male or female professionals. Social

constructions of suitable occupations for each gender had become inherent within occupational status. Three prestige scales were developed. One scale contained occupations without knowledge of incumbent sex and the other two scales assigned either male or female to the occupations (Guppy and Siltanen 1977:324). The implication of ranking occupations with the incumbent's gender identified is that "the respondent may react to the occupation as a status or social position but may also react to the male or female stimulus according to how well one feels a male or female could perform within that particular occupation" (Guppy and Siltanen 1977:322). Guppy and Siltanen reported that both men and women employed in female dominated occupations had low occupational prestige scores, but women experienced higher individual esteem within these occupations because they were employed in "sex-appropriate" occupations.

I attempt to measure the influence of incumbents' gender on occupational prestige between 1965 and 2005. Lower occupational prestige scores for female-dominated occupations in previous studies make it clear that prestige is significantly dependent on, and influenced by, occupational incumbents and the public's perception of the ability of each sex to complete a task or develop a skill. Prestige and status appeared to be measures of whether an individual was employed in a job considered socially correct for his or her sex, and then income was rewarded based on this match. Pure skill may be over or understated based on gender or minority status in the evaluation of occupational role status. The current project will explore the idea that 1975 patterns are still evident in the professions.

The theoretical use of role does not lose importance in an occupational prestige context but rather requires sub roles, such as gender, to make it conceptually useful. In Guppy and Siltanen's study "although the ordering of the prestige hierarchy of the male and female

occupational structure may be similar, the mean levels of occupational prestige may differ" (1977:326). For instance, "physician" may appear at the top of both the male occupations and female occupations, but do they both reap the same amount of prestige for being physicians? Similar occupational hierarchies within each sex still demonstrate some functionality because society has agreed on the value of occupations, and those with more social power take the roles with the best rewards and lowest costs (Turner 1991:444). Guppy and Siltanen's (1997) research suggests that occupational status and prestige are not simply reflections of the value or function of *an occupation* in society, but the value or function of *occupational incumbents* according to society.

In response to the changing work force, Blishen and Carroll in 1978 devised a socioeconomic index specifically for women. This index also used Pineo-Porter prestige scores regressed onto 79 occupations, containing both males and females, to identify the socioeconomic status for 465 census occupations with female incumbents (Blishen and Carroll 1978:353). The researchers concluded that the use of socioeconomic status as a composite variable poorly represented women's occupational experiences. Duncan (1961:144) also insisted that not examining occupational incumbents negates the "ability, performance and motivation" of individuals across different occupations and is not necessarily reflected within a composite socioeconomic status measure. Blishen and Carroll's (1978:356) study asserted that although men and women's income and education both successfully predicted their occupational prestige, it was important to examine these two variables separately because they found that women had higher education but lower income than males within the same occupations. Blishen and Carroll's concern with women's unique status compared with men's is another example of the more individualistic theoretical approach that would guide the next two decades. In measuring

education and income variables simultaneously, similar socioeconomic status means for men and women disguised the gender inequality observed within occupations.

Blishen and Carroll's index based on women in the labour force was designed to address gender inequality within occupations, income and education. Monica Boyd (1986:458) criticized Blishen and Carroll's (1978) scale for the use of a minority of male incumbents' income and education levels to generate occupational socioeconomic scores for female-dominated professions, ignoring women's intra-occupational inequalities. Blishen and Carroll's method minimized the validity of occupational status scores by gender because women were concentrated in particular occupations.

The Pineo-Porter prestige scores for 75 matching census occupations were regressed onto the sum of median income for both genders and the proportion of people with higher education in each occupation (Blishen, Carroll, and Moore 1981:470). This equation was used to calculate the socioeconomic scores for the 514 occupational categories from the 1981 census (Blishen et al. 1981:470). The researchers began to identify the validity issue of comparing prestige and socioeconomic scores when they were treated interchangeably, as well as proposed the superiority of individual over general level analysis by suggesting that a national level of analysis may not be an ideal perspective to evaluate occupational socioeconomic status (Blishen et al. 1981:471-2). Even with the continuing evolution of Blishen's index, issues of validity and context continued to be questioned as advanced analysis techniques were discovered and efforts were made to accommodate a changing labour force and increased division of labour.

An important element of contextual analysis is recognizing groups that are influencing the labour force (Iversen 1991:4). In examining contextual analysis and its impact on individuals, Iversen (1991:6) questioned whether aggregate information can accurately predict missing

individual data when he wrote "we cannot commit the ecological fallacy of interpreting the group correlation as applying to the individuals." Blishen et al. (1981:472) admit that "assigning socioeconomic scores to individuals on the basis of their occupations cannot be a viable substitute for assessment of people's individualized experiences in the labour force."

Boyd identified women as a group that was highly involved in the work force, shaping occupational status, and being shaped by occupational roles. Accordingly, measuring occupational status without accounting for inherent occupational, economic and educational inequalities among minorities would be unlikely to produce a valid and objective measure of occupational status. In a comparative study, Boyd (1986:465) evaluated male, female and both sex indexes and concluded that utilizing income and educational data from both sexes provided the evidence most "consistent with what is known about the male-female occupational segregation, the lower incomes of women compared to men, and the generally observed disadvantaged position of women in the labour force."

Ultimately Blishen et al. (1987:468) decided against utilizing a more individualistic approach because breaking down aggregate information into more individual units of analysis was much more complicated and it was important to keep the definition of socioeconomic status measures clear. In their analysis, socioeconomic stratification is not at the individual incumbent level but at the occupational level. Blishen et al. (1987:471) found a "weak negative relationship between an occupation's gender composition and its socioeconomic status." This relationship was attributed to women often working in lower-income jobs and in occupations requiring higher levels of education. Blishen et al. (1987:471) acknowledged that as a composite measure, their scale "tends to obscure the very strong relationship between gender composition and median income…" As noted above, many researchers have found that women receive different

socioeconomic and prestige rewards based on income and education, especially women having higher education than their male counterparts within the same position (see Blishen and Carroll 1978).

Blishen et al.'s (1987) argument for retaining the use of a composite measure of socioeconomic status is that different researchers are looking for a variety of data breakdowns and the composite is a tidy measure to understand occupation hierarchies, especially when working with limited data. Further, at the occupational level the entire workforce would be captured in analysis, which now included more women. A concern about this rationale is that workforce characteristics and patterns were constructed and run by men and this would not necessarily capture women's income and educational experiences in the workforce accurately.

In 1997, Hauser and Warren created a socioeconomic index using prestige ratings from the 1989 General Social Survey and occupational data from the 1990 United States census. They believed that the differences found between socioeconomic index measures could, for the most part, be attributed to the gap between socioeconomic status variables and the actual employment responsibilities of individual incumbents (Hauser and Warren 1997:183). The three main themes addressed were gender, earnings, and intergenerational correlations. Greater numbers of women are often found in part-time jobs, a pattern which ultimately affects their income levels. For this reason, income was calculated three different ways. Earnings, rather than income, were calculated as one of three variables: $25,000 or more in 1989, earning $14.30 per hour or more, or earning a total of $25,000 or more in a full-time, full-year job (Hauser and Warren 1997:201). Prestige ratings also had different variable compositions. Prestige was regressed over the following: weighted by gender, by hours worked, by income, a pre-defined percentage, and a logistic transformation; and weighted to socioeconomic data for each gender and total sample

(Hauser and Warren 1997:203). The authors were particularly concerned about how prestige and socioeconomic status were often treated similarly, and would consequently mask unexpected dissension between one another within an occupation. For instance, the study found that truck drivers earned more than would be expected based on their education level and occupational prestige (Hauser and Warren 1997:209).

The authors arrived at several suggested improvements to socioeconomic indexes to increase the use and validity of these measurements. The conclusion drawn suggests that indexes should no longer be composite measures, that education was the primary indicator of occupation and thereby socioeconomic indexes, and finally, that education predicted both wage and prestige, making prestige scores unnecessary within socioeconomic index calculations (Hauser and Warren 1997). These suggestions were intended to help better understand status inequality. For instance, high socioeconomic status for women has been attributed to their higher educational and "social origins," which end up concealing their generally weak occupational status (Boyd 1986:464). It is therefore important to carefully consider educational and income weights.

Nakao and Treas (1994) selected 160 occupations from their sample of 740 occupations to try and determine any changes in prestige of occupations between 1964 and 1989 despite differences in scoring techniques, including concerns about time shifts and differences in classifying occupations, across researchers and studies. These 160 occupations shared the same title and occupation scores in both 1964 and 1989. Nakao and Treas (1994:17) found that 44 percent of the occupations experienced a statistically significant change in prestige. Public ranking of occupational prestige order did not shift, but respondents did increase the prestige they attributed to occupations. This research saw white-collar occupations both increased and decreased in prestige, depending on whether the occupations were managerial and professional

or technical, sales, and administrative respectively. However, blue-collar occupations unanimously increased in prestige (Nakao and Treas 1994:17). The white-collar occupation prestige increase finding makes the current project more interesting by examining professions in isolation to see how they have shifted over the past quarter of a century and offer an explanation for this apparent shift.

Although less attention has been paid to socioeconomic status and prestige scales lately, it is interesting to speculate about a possible return to the use of occupational role as a meaningful concept, where it may be assumed that society has reached approximate gender equality in the workplace and therefore has less need to specify prestige by the gender of incumbents of occupations. There is evidence to suggest that socioeconomic status and prestige scale measures may be reverting back to theoretical assumptions made prior to 1980. The period following the strong influence of the Women's Movement may have inspired a deeper look into women and occupational prestige, especially as more women had entered the workforce. This interest may have subsided as some scales, appearing at the beginning of the twenty-first century, show more aggregate and societal level scaling, ignoring more individualistic occupational experiences. Assumed racial/ethnic and gender equality within occupations may entice researchers to treat occupational incumbents identically, as in early scale construction. Contemporary Canadian scales may exhibit a return to occupational role as a single concept, neglecting occupational incumbent characteristics, because of increased equality and an exaggerated perception of minority inclusion in the labour force.

2.1.2 The 21st Century: a Return to Prestige Ratings Irrespective of Occupation Incumbents

Zhou (2005) outlined an institutional theoretical viewpoint as an alternative to traditional functionalism's theoretical assumptions. Zhou (2005:94) identifies "differentiation," the need for occupations to be seen as having different value, and "incorporation," the need for everyone to accept this differentiation, as crucial to his institutional theory. Institutionalism is based on the "logic of social recognition," where the acquisition of prestige rests on occupations' ability to "justify their claims on the basis of legitimacy and appropriateness" (Zhou 2005:95). This validation is usually confirmed by fact, often scientific. Zhou (2005:131) concludes that formal knowledge, not solely societal necessity, provides the justification and differentiation of occupations to be accepted and accorded prestige.

In observing the shift of occupational prestige from 1975 to 2000, Goyder (2005) observed a new occupational ordering and distribution. Prior to 1975, occupational prestige was considered to be a stable and consensual descriptor. This ranking has remained intact over time although overall shifting has occurred. This sense of understood agreement was noted by Goyder (2005:2) when he described how "circa 1960 sociologists believed that a natural status ordering for occupations existed and that members of the public knew that order." In tracing prestige, Goyder (2005:6) found that "reduced inequality in the shape of the status hierarchy of occupations and shifting of the rank order took place over the final quarter of the 20th century." Three influences had minimized occupational prestige differences. First, the "fragmentation of social culture" had led social class to be examined through more individualistic perspectives such as ethnicity, gender and education level. Second, the new economy found fewer people entering lower status occupations which led to their increased prestige through typical supply and demand. And third, new technology assisted individuals to perform their work more easily and began to undermine the need for professionals with distinct and restricted skill sets (Goyder

2005:5). The change in observed prestige allocation was ultimately attributed to a "less extreme form of inequality," more so among general occupational prestige than incumbent or significant demographic influence (Goyder 2005:17). My project adds a new dimension to this body of work by asking whether incumbent characteristics, particularly gender, and the new economy lowered occupational prestige for professions relative to other occupations.

Using one parsimonious variable, assumed to represent incumbents in occupational roles, to efficiently examine individuals' social standing may be extremely attractive to researchers with numerous and complex variables. This task is easier with more advanced scaling systems and higher approximate representation by women. In 2005, Goyder and Frank developed a new occupational prestige scale based on the NOC. This classification was used because of the NOCs inclusion of "skill level" and "skill type," which allow prestige differences to be identified across two dimensions (Goyder and Frank 2005:9). Occupational categories used by previous scales were often limited in analysis because they were neither organized sociologically nor detailed enough to reflect skill level. Goyder and Frank (2005:4) believed that "people taking a modeling approach to data often want to conceive of occupation as one of several explanatory variables included in a multivariate tabulation."

Recently, Boyd (2008) has used occupation-specific education and income to produce a new socioeconomic scale from 2001 Canadian census data. This scale allows for the study of intergenerational inheritance and gender inequality and identifies demographic inequalities occurring in occupational status scores (Boyd 2008). Despite a trend returning to the concept of an occupation representing all incumbents, this new scale identifies inequalities in occupational status scores occurring across demographic groups in Canada and demands that researchers be mindful of the unique differences and challenges faced by incumbents.

The attribution of skills to particular genders has been constructed and engrained over time and this makes it difficult to change the perceptions of associations, organizations, and in some cases, individuals. Today, hidden inequality prevents individuals from being fairly and equally represented in occupations based on meritocracy. This idea is exemplified by Ralph Turner (Jonathan Turner 1991:443) who described how "when functional roles do become infused with representational content, they become highly resistant to change." Theoretically and ideally, occupational roles will be meaningful once they are more reflective of society's demographic composition.

The importance of examining professions rests on their high skill levels and their advanced educational preparation. The pronounced increase in women's involvement in the professions heightens the need for research in this area. The new economy rewards those occupations that are knowledge-based, requiring high education, innovation, risk and more global exposure to communications. Consequently, this new economy has improved the standard of living or lifestyles of those employed in more fast-paced and technology-based occupations, while leaving those employed in less knowledge-based occupations behind and potentially decreasing professional social status rewards.

2.2 New Economy and Technology

2.2.1 Requirements of the New Economy

We saw in the preceding section how the new economy refers to the later 1990s and early 2000s years, a time of economic growth with low inflation. It emphasizes a highly educated and knowledge-intensive workforce placing significance on flexibility, innovation and risk, all correlating with new technologies allowing for practically effortless global communication (Carnoy, 2000:1).

Technology helps and advances the more educated workers over the less, however according to Carnoy (2000) and other researchers, this does not mean the end of jobs, but instead a transformation of how work is performed. The new economy requires two things: flexibility and networking. In terms of flexibility, employers' need for workers waxes and wanes based on demand. More and more employers are looking toward part-time employees, contract and temporary workers (Carnoy 2000:56).

The second element of the new economy is networking. With new technology, it is even easier to network with those in similar fields, between firms, positions and levels (Carnoy 2000:56). Networking has become increasingly important to workers and this relates to the need for more flexibility. Individuals no longer enter the workforce into one position and remain there for their entire careers, but rather, they must adapt to a flexible workforce where demand quickly rises and falls. Workers must learn to focus more on their transferable skills that they can take with them across firms, companies and organizations. This results in more generalists, rather than specialists. Professions continue to divide and specialize.

Professionals have extensive opportunities for networking. For instance, they come out of school with a pre-made network of those already interested in their field, they join professional associations and they typically end up socializing with one another outside of work (Carnoy 2000:176-8). The interesting concept is that professions are built around a very insular set of rules and regulations. They strive to maintain a monopoly over the market and desire to keep their specialized knowledge to themselves, thereby keeping the demand for their services high.

Professionals fit this "new technology" world by being highly educated and skilled, but they may not be as interested in disseminating pieces of their knowledge to create technology that allows those less educated and skilled to perform elements of their work. By allowing

"outsiders" into their professional realm, they lose autonomy and monopoly over their profession which is so strongly linked to their identity and what makes them professionals enjoying high levels of prestige. This struggle is for knowledge control and removing sole power from one profession.

2.2.2 Technology: the Inequality Divide

In describing economic changes, Heather Menzies (2005:7) believes that the "information highway is emerging as the axis of this new economy." Except for a minority of people who have control over these computers and information highway, others merely operate under their instruction. Menzies (2005) argues that the human element to work is no longer necessary and is being replaced by technology and the computing industry. Individuals may no longer require what has been termed *discretionary specialization*, because machines or computers are surpassing the human capacity to use their own decision-making skills and intellect to control business transactions and events, where individuals use their own discretion or judgment while performing their work. Other researchers argue the opposite by stating that "new technology increases the importance of the human mind in the work process" (Carnoy 2000:43). New technology does not decrease the number of jobs or the skill of workers, but rather it demands a more highly skilled workforce to operate the new technology behind what were once very repetitive tasks.

Carnoy (2000) does not endorse the argument that new technology or the new economy replaces workers or de-skills work. Instead, he is of the same mindset as Bell (1973), arguing that the more technology and knowledge that can be generated, the more jobs and a general increase in the use of knowledge for workers typically found in low-knowledge jobs. This may

potentially increase prestige, an argument that internal stratification is not shifting positions within a field, but all individuals in the field are simply increasing in knowledge.

General research in the area of technology suggests that higher education or over-credentialization leads to greater "polarization" of good and bad jobs or occupations as a result of increasing technology (Hughes and Lowe 2000; for example, Bell 1973; Braverman 1974). Technology use may also result in occupational prestige differences as more people are exposed to technology and it becomes less esoteric. In discussing the new economy, Menzies (2005) describes what she terms the "digital divide," which forces a partition between the rich and poor. This is the link to the concept of social stratification in this project. According to Menzies (2005), this division makes a clear distinction between those who have access to and control computers, the rich, and those who are excluded from using and are controlled by computers, the poor. For Menzies (2005:144), the new economy is not the people's economy, its technology has created a division between those with the privilege and power of owning or using the technology and those who are owned or used by the technology. Those occupations that utilize technology more seem to have an advantage in the workforce.

For higher-skilled occupations, individuals are the mind behind the technology; these individuals invent and produce the technology using their knowledge and innovation. This abstract thinking is valued in the new economy and should garner higher prestige. For lower-skilled occupations, individuals often use the technology generated for them. These occupations would receive lower prestige because they are not considered creative or place individuals in unique circumstances, and there is very little autonomy. The use of technology by lower-skilled occupations can be argued to be positive in that these individuals are now exposed to technology that they would have otherwise never learned. The opposing view is that this technology

alienates workers from their work as technology or machines take over their original craft. Further, much like specialization within professions those who invent technology continue to advance to even greater technology, never allowing for individuals in lower-skilled occupations to close the technological knowledge gap between those in higher and lower-skilled occupations.

Carnoy (2000:43) expresses a similar point to Menzies (2005) about how there will always remain highly educated and skilled individuals, but in the future some occupations may make a transition to more knowledge-based tasks through the medium of new technology. The difficulty for professionals to advance is that they must be willing to invest the time and relinquish the control over their monopoly of esoteric knowledge. To allow lower-educated and skilled workers to engage in higher-skilled tasks, professionals would have to organize and divide their work and put the tasks to be performed into a form of technology that is user-friendly to those without professional education and training. The amount of education and training that professionals have invested into their careers makes it unfavourable to outsource and share their knowledge.

Carnoy (2000) argues that even typically lower-skilled positions will increase in knowledge and human thinking due to increased technology being utilized at all levels of work. Further, another study witnessed the increase in skilled occupations, but simultaneously witnessed the service sector contributing to a more polarized workforce as this sector showed both use and non-use of computers and technology to complete their jobs (Gallie 1994:59). One study argues that the "upskilling" witnessed in the 1990s led to some occupational polarization, but also that organizations or companies that require a low skill level do not utilize technology or computers very much (McMullen 1996:70).

Hughes and Lowe (2000) examine the occupations that require the use of computers and how this influences earnings and necessary skill level of the occupants. Hughes and Lowe (2000) ultimately conclude that technology is not the primary factor driving whether an individual finds him or herself in a "good" or "bad" job, but rather individual demographic characteristics and the occupational environment have a stronger influence on job quality. The relationship between high skill and earnings does not automatically translate into high technology use because all skill levels are increasing their use of technology.

A key theme of the new economy is that of "flexible production" (Carnoy 2000:9). This idea of flexibility in the workforce is important, especially as the workforce and work itself are becoming increasingly global, more competitive as faster and newer technology is being invented each day. New technology and flexible production may prove challenging for professions with long-standing procedures, and this may limit increases in occupational prestige associated with the new economy. The fast pace and flexibility of the new economy is not something professions are known for, but rather their history is built upon long-standing theory and tradition.

Zhou's (2005) fresh theoretical approach to occupational prestige has a more consumer-based or driven quality. The work suggests that the public's ability to "differentiate," "incorporate," and socially recognize occupational prestige may be changing (Zhou 2005:95). Consumers today have greater access to information and knowledge that has been disseminated through technology. They are more informed and have more agency in their life decisions, culminating in a culture with more assertive consumers, unafraid to help themselves. For instance, through the Internet, consumers can research illness, symptoms, and potential solutions and options before going to see a physician. Computer software for accounting and architecture,

as well as, do-it-yourself legal kits and self-help books allow consumers to decrease the extent of their dependency on professionals and their services. The implication of this new technology is a potential eroding of professional prestige.

2.2.3 Technology: The Gender Divide

Hughes and Lowe's (2000:37) study finds that professionals (including: life sciences, mathematics and computer professions, architects, and engineers) and clerical workers are the heaviest computer users, an average of 20 hours more per week. The researchers (Hughes and Lowe 2000:37) divided the professional category into those that use computers highly and those that do not and found that those that used computers more were increasingly likely to be male, between 25 and 44 years of age, in a permanent, full-time job, with autonomy to make their own decisions at work and usually earned more than $30,000 or received a promotion in the past five years. In contrast, in the clerical sector, women were more highly represented, between 25 and 44 years of age (Hughes and Lowe 2000:39). Specifically, those employed in professional occupations that demonstrated a low use of computers were more often female, 73.2 percent, versus only 38.4 percent of females in high computer use professions (Hughes and Lowe 2000:39). Women are using less technology overall and this could limit their opportunities and performance in the new economy.

New technology has led many to believe that one benefit is the huge growth in women's jobs. Carnoy (2000:33) and other researchers admit that many of these jobs are not "desirable," but Carnoy goes on to say that,

> "Arguing that low-end jobs have little meaning for women also misses the point. Women work for lower wages than men; they are more likely to work in part-time jobs than men, and they tend to move in and out of the labor markets more often

> than men. That does not make them less valuable as workers or their jobs less meaningful. Indeed, the increasing advantage that women seem to be gaining in the labor market may tell us more about the future than the declining participation of older men."

This argument is difficult to digest because although women are entering more positions, the fact *is* that they are in these low-paying, less desirable, less respected positions and the dealing with the related difficulties that working in these positions present. Stating that a woman working in a low-end job with little meaning does not make her less valuable as a worker implies that many individuals may see her otherwise.

2.2.4 Technology: Occupational Prestige

The new economy has both human independence and a relationship to occupational prestige. It is important to consider the public's perception of professional prestige and promote the inclusion of their perceptions because, ultimately, it is these perceptions that will drive the economy and the professions within it. The public perception of and respect for occupations may be more powerful than researchers or institutions realize or are willing to realize. Professions need to network outside their own field to increase their innovation and flexibility. Goyder (2005:18) encouraged the exploration of individual perceptions of occupational prestige because "people living in a culture may absorb and synthesize the consequences of social change for an occupation faster than the social institutions that control educational preparation and income rewards do." These connections are crucial to consider today. It is this public that ultimately utilizes these occupational services and determines how and where it will allot or spend their hard-earned money for these services. It would be a mistake to underestimate the influence of public perception and autonomy. As Williams (The New York Times 2008) describes,

> "in a culture that prizes risk and outsize reward – where professional heroes are college dropouts with billion-dollar Web sites – some doctors and lawyers feel they have slipped a notch in social status, drifting toward the safe-and-staid realm of dentists and accountants. It's not just because the professions have changed, but also because the standards of what makes a prestigious career have changed."

Richard Florida (2002) describes how success is now viewed as creative, flexible and autonomous. Once again, we see how the requirements to enter a profession have not changed; the public perception of success, prestige and social status has changed.

More and more individuals may be trying to enter higher-status professions to gain more control over their work or perform more "meaningful" work. Technology has been introduced to most, if not all, occupations which leaves many workers with, perhaps easier, but less "meaningful" work (Goyder 2005:5). Goyder (2005:5) suggests that the decline in professional prestige may be due to the fact that technology has opened doors for individuals to perform many tasks that would have previously required them to seek out professional help. Technology and the new economy may help to explain part of the general decline in professional prestige, for example, the decrease in lawyers' prestige by 15 points that Goyder (2005) found in his recent occupational prestige research.

C.N. Alexander (1972) describes how prestige is not a fixed attribute and can be altered. The ability to access and learn about technology is also not a fixed attribute and this accessibility can be altered to benefit individuals. We can change technology's capacity, how it is used, and who has access to it and thereby improve human lives or introduce greater equality. "Technology is a social construction. Its design, organization and use reflect the values and priorities of the people who control it in all its phases, from design to end use. After the design has been implemented, the system organized, and the infrastructures put in place, the technology then becomes deterministic, imposing values and biases built into it" (Menzies 2005:27). Even though

Menzies states that once the technology is built it contains the values and decision-making skills of those who created it, it still opens the idea that it was built in a particular way for particular research and that there is the opportunity for it to be reconfigured, that it does not necessarily have to remain this way.

2.3 Professions

2.3.1 Professionalization

Industrialization occurred as life became more focused on the city centres, arising from increasing urbanization and an explosion of scientific discoveries. This industrialization resulted in a larger middle class and consequently a "market for the services of skilled practitioners" (Rothman 1998:66). Some occupations became professionalized as one profession took on the responsibilities of many previous occupations. For instance, undertakers merged the clergy, gravediggers, stable keepers, cabinetmakers, nurses and embalming technicians into one profession (Rothman 1998:66). Other occupations, such as medicine, have become increasingly specialized in "response to social, technical, or demographic trends that create the opportunity for the birth of new occupations" Rothman 1998:67). Trauma therapists exemplify this trend.

Eliot Freidson (2001) has a long history of examining occupations and professions. Freidson delves further into the conceptualization of professions, what they are, how they form and how they remain privileged. Monopoly and credentialism intellectually and physically separate professions from occupations and are the distinguishing elements to a professional's economic privilege (Freidson 2001:198). According to Freidson (2001:17) professionalism "is a set of institutions which permit the members of an occupation to make a living while controlling their own work. That is a position of considerable privilege."

Generally, professions are fairly homogenous in that they often have more power than other occupations. They are commonly believed to be of high status and prestige, although they have experienced a decline in status over the past quarter century. This group is interesting because it controls societal resources and commands societal values and decisions. Professions' control over resources and services make consumers dependent on them for significant assistance that can have a very positive or negative impact on consumers' lives.

A difficulty for many professions, however, is that their homogeneity leads them to attempt to attain prestige in very minute ways. For instance, university professors all have similar education and are not remunerated drastically differently once they reach full professor status, so prestige is attained through smaller acts, such as the number of published articles in a year or the number of conference presentations.

One of the reasons for the high prestige of professions is that they are kept in short supply. By not permitting many to enter into an occupation, that occupation can set the cost for its services. Professions do this through credentials and monopolies. Long training periods and difficult admission requirements prevent too many professionals from practicing, which would drive demand down. Professions are used in my research as a unique group who want to increase their power and control over societal access and lifestyle and potentially control their respect and reputation among members of the public. It is interesting to see how, if at all, the public view of professions has changed.

2.3.2 Credentialism and Training

Professions advertise their credibility and capabilities through their credentials. Freidson (2001:78) refers to this as a "signal." This "signal" informs other professions

and occupations as well as the general public that these particular individuals have the exclusive right to attend to certain services and tasks. It is credentialism, or more generally, the length and type of education that distinguishes professions from crafts or technical work.

Professionals are trained through professional schools affiliated with universities. The difference between this type of training and that of the technical kind is that professional training is based on a theoretical background and is taught by members of the profession in question (Freidson 2001:84). Technical work or the crafts are often taught primarily through apprenticeships or on-the-job training. Professional status is derived from a profession's ability to select the individuals who will be allowed into the profession and those who will be excluded. This inclusion and exclusion is determined by the necessary requirements to enter the professional school and gain the necessary credentials. For instance, doctors were not always as prestigious as they are today because they did not have the accurate scientific evidence to identify the causes illness and could not consistently identify illness and recommend a proven solution (Bok 1993:25). In order to become a legitimate doctor in 1850 at Harvard, one was only required to take a four month program (Bok 1993:25-6). College professors also did not begin with a very prestigious reputation or come backed by exceptional educational requirements. As Bok (1993:28) describes, "prior to the Civil War, college instructors were not expected to do research or to possess any special knowledge or scholarly training. The institutions in which they taught were more like preparatory schools than universities."

A similar rise in professionalism came about in the legal profession. This profession faced a lot of skepticism from individuals who felt that their knowledge or capabilities to represent themselves was being undermined (Bok 1993:26). In Canada between 1850 and 1900 a transition toward a more formal entry process and stricter requirements to practicing law. Lawyers began to make changes that resulted in restricting the practice of law to true lawyers or barristers and assigning more power to the courts (Gidney and Millar 1994:70). This transition toward training prevented laymen from working in this field and structured procedures throughout the court system required individuals to hire lawyers (Gidney and Millar 1994:71).

The Law Society of Upper Canada was established in 1797 and the Benchers, those who govern the law society, had the power to make their own rules for the profession and put these rules into practice in areas of politics, government and education (Gidney and Millar 1994:81). The law society was made up of individuals who were chosen based on their status in society, most of these individuals were from the social elite and many had political roles (Gidney and Millar 1994:74). The composition of the Law Society allowed members to decide who had access to and entered the field. A meritocratic system for acceptance into law did not exist, to the detriment of those who were poor, racial/ethnic minorities, and women.

The Law Society did not require that attorneys or solicitors have the same requirements as barristers and this resulted in large numbers of men becoming attorneys and solicitors who competed for the business of barristers from the 1830s on (Gidney and Millar 1994:77). The law society began to feel the pressure of so many practicing in the field and increased the number and difficulty of the entrance exams to restrict or at least limit admittance to law (Gidney and Millar 1994:78).

It was not until 1897 that Ontario saw its first woman barrister, Clara Brett Martin. Restrictions to practicing in the legal field were worse for women. Around the same time as women were entering offices and jobs, there was a general sentiment that women were taking jobs usually reserved for men and therefore making men economically unstable and threatening their masculinity to be providers in their homes (Gidney and Millar 1994:328-9). Women were not welcome in the legal profession. Their access may have been further restricted by the fact that in the 1890s a law student would still have to spend the majority of his apprenticeship in Toronto (Gidney and Millar 1994:383). The necessity to travel and the added expense would add further hardships for men who were not members of the elite, and for women, who were not associated with working away from the home.

2.3.3 Definition of a Profession

Defining an occupation as a "profession" is a difficult and complex task. As today's economy grows at a more rapid rate than ever, more and more occupations are emerging and claiming professional status, and the distinction between occupations and professions, once considered fairly simple, has become tricky. There is general consensus on the degree of technical skill and training required. Often this means educational attainment beyond the baccalaureate level, and the value of the work to society. William J. Goode (1957:194) made this statement about how professions are defined and held together by a sense of identity and common values: "the community's role definitions vis-à-vis both members and non-members are agreed upon and are the same for all members." Goode saw professions having a sense of autonomy while also having control over their members. These are re-occurring themes in the professional literature.

Professions were selected for this project for two reasons. One is that they represent quite a unique group that shares similar historical characteristics and goals such as higher education, long periods of training, a monopoly, autonomy, and service to the public. The second reason is that professions fit with the idea of the new economy because of their common characteristics and initiatives, making them an interesting up-and-coming research area. Professions are formed and operate based on high education levels and esoteric knowledge, which in the new economy, should result in higher prestige. Professions create and possess a separate knowledge base, the freedom to make their own rules and govern themselves, generate an internal hierarchy and are gatekeepers to their knowledge (Rossides 1998:46). It is important to also observe if the general public is accepting, rejecting or neutral to the path of this new economy through the ranking of professions' prestige.

Pavalko's (1971) profession-occupation model distinguishes between professions and other occupations based on eight different continua (see Appendix B). Accordingly, professions have a systematic and unique theory with intellectual methods usually based on science, they perform work that coincides with societal values, their training period is often long and specialized, with an emphasis on working with ideas and not things, and they hold a distinct set of norms (Pavalko, 1971:18-19). Further, professions are motivated by service to the public, have significant autonomy, a sense of commitment to and community with their profession, and have a written or unwritten code of ethics (Pavalko 1971:20-25). The autonomy identified with professions, Pavalko (1971) views as being on both collective and individual levels. Despite individual autonomy in the work professionals often perform, they also experience this autonomy on a group level in society.

Pavalko's (1971) model is similar to Rothman's (1998) in that they are both based on scales of how "professional" an occupation is, however, they differ in that Rothman sees professionalism continually evolving or changing. Abbott's (1988) "professional purity" thesis is linked to this consumer theme. Those professions that are more people-complex may encounter more informed consumers who require greater time for explanation and demand more options and better services. This may result in a further decrease in prestige of these professions. For example, an article in the *National Post* (Weeks 2006) described how pharmacists in Canada want more power and autonomy to prescribe drugs than they currently possess. The article explains how "traditionally, pharmacists have been watchdogs to ensure that the prescriptions being written by doctors are safe and appropriate, but giving them prescribing power removes pharmacists from this role – and means no one is acting as a watchdog over them." There is a concern that pharmacists may prescribe drugs and tests that are unnecessary because of an "economic incentive" (Weeks 2006). While in support of this change, the same board member of the Consumers' Association of Alberta insists that "pharmacists are professionals. They work under a code of ethics and a code of conduct. As any professional would, only be making decisions in the best interest of the patient" (Weeks 2006). From this article, it is clear that professionals put great effort into defining themselves as necessary, as well as, possessing a distinct and exclusive skill set, consequently feeling a deserved level of prestige.

Similarly and expanding on Pavalko's work, Rothman (1998) views professions as having expert knowledge and control over their working conditions through a monopoly and their own autonomy. There is a general consensus on the influences of occupational prestige, emphasizing the degree of technical skill and training required, and the value of the work to society. For instance, Paula England (1979) determined prestige factors by reflecting on the

difficulty of the task, the difficulty of working with people, necessary education, and required specializations to master a trade or enter a profession. For further professional definitions and prestige evaluations see Leicht and Fennel 2001. Rothman (1998:65) encourages viewing professionalism along a spectrum of "professionalization," ranging from highly professionalized groups (i.e. lawyers and physicians) to those less professionalized groups, such as social workers and teachers who have less control over their own activities.

Pineo and Porter (1967) had a clear list of occupations divided into professions and those they view as semi-professionals (see Appendix C). They organized the occupations by "socio-economic groupings" (1967:29). A general agreement is assumed with Pineo and Porter's profession list, however, some of their "semi-professionals" may now be considered genuinely professional, for example, registered nurses, chiropractors and social workers. While others, such as computer programmers and physiotherapists are controversial or debatable due to their more common presence and, in some cases, the development of their own associations.

In 1984, R.I. Brewer published research that examined how professions were viewed. He noted that many of the same principles of defining a profession held from Goode (1957) and Pavalko (1971). Brewer (1984) included accountants, lawyers, university teachers, clergy, medicine, biological and physical scientists, engineers and architects/surveyors as professional groups. Brewer had difficulty categorizing managerial occupations and deciding if they contained professional characteristics. One dimension that Brewer (1984:387) felt should be included in the definition of professions was that they were "communities of equal practitioners." In 1980, the Office of Population Censuses and Surveys (Brewer 1984:387) viewed professions as sharing one employment status and "devoid of a hierarchy of responsibility or power." Within one profession, all individuals basically held the same knowledge, power and authority. This office

also defined professions as potentially being self-employed with or without employees, but ultimately it did not provide a concrete definition of professionals (Brewer 1984:386). Later in the present research, the idea that professionals experience equality within their profession will be questioned by the concept of internal stratification.

Again, looking toward law, the legal profession is an excellent example of how the occupation of lawyer fits the professional construct. A more specific professional definition about the legal profession is provided by DeLloyd Guth (as cited in Mossman 1993:157), where "most problem-solving activity undertaken by lawyers involves specialized skills, including finely-honed abilities for determining relevance (and excluding irrelevant ideas), for making judgments about the applicability of principles to differing fact patterns, and for reasoning in a systematic and efficient way." This description of the legal profession fits nicely into the earlier definitions and clearly follows the pattern of what is believed to distinguish a profession from an occupation. DeLloyd Guth (Mossman 1993:157) goes on to describe how the "idea of 'searching' also implicitly suggests that the object of the search can be 'found,' and that those who conduct such searches will be successful in finding the law so long as they follow a systematic process of investigation, one which is neutral and objective rather than normative or critical." Again, this idea of "finding the law" coincides with a very scientific and concrete view of professions. Lawyers are well trained and able to solve the problem at hand, even if the problem varies from those they have previously encountered.

2.3.4 Occupationally Controlled Labour Market

Of the three types of labour markets that Freidson (2001) outlines: free labour market, bureaucratic, and occupationally controlled, professions are found in the latter. The free labour

market is open to any individual and ultimately it is the consumer that determines the value of the position. The occupations are usually based on knowledge that can be acquired through everyday life and there is no particular way of going about a career in that field (Freidson 2001:65). The bureaucratic market has very specific occupational requirements and the career path is linear and occurs within one organization or company (Freidson 2001: 67-9). This type of labour market is also extremely hierarchical. The occupationally controlled labour market, where professions live, as Freidson (2001:73) views it is

> "one in which organized occupational groups have the exclusive right to determine the qualification for particular jobs and the nature of the tasks to be performed by individuals in those jobs. Their jurisdiction is established by the outcome of direct negotiations or struggles with other occupational groups that may claim to be able to perform the same or contiguous and perhaps overlapping tasks in a division of labour."

Through this type of labour market, those within it can control their incomes. For instance, because the occupation is so restrictive in terms of entry and performance the members of it control the number of individuals practicing their work, and thereby, have some sort of average income depending on the demand (Freidson 2001:73). Another method of controlling income can be having a minimum fee set for the services of the occupation and the wages are determined "by negotiations between organized occupational groups and between them and their labour consumers" (Freidson 2001:74).

Professions monitor who enters and exits this labour market and what qualifications are required to reach and remain within the profession (Freidson 2001:73). Professions are at an extremely autonomous level of organization where they control their own "market" and continue to offer specialization to consumers. In relation to occupational prestige, professions can run into conflict internally because their qualifications for entry are internally standardized and all

members have a similar amount of authority or control. In many professions, such as engineering, psychology and veterinary medicine, there is not a typical internal hierarchy in terms of advancing or upward mobility. Professions usually involve more "horizontal" movement where individuals do not necessarily gain more authority, but have the opportunity to gain minimal amounts of prestige. The difficulty with professions is that those who work within them are expected to simply do the tasks they were trained to perform and there is limited room for advancement. The problem with this structure is that "if you are good at your craft, and unless you choose to make a career shift, you are expected to continue to apply that craft" (Moses 2006b:82). Accountants, lawyers and physicians provide examples of exceptions to this pattern by having the opportunity to advance within their profession to positions of more authority. For many professions, the lack of upward mobility results in all members remaining at a similar level of practice or some members may choose to gain more authority by transitioning into a more administrative or executive role (Freidson 2001:76). The cost of this transition, however, is that the individual will no longer practice the craft or skill for which he or she originally trained.

2.3.5 Internal Stratification and Specialization

Specialization has increased over time and has resulted in occupations that are based on these specializations. This transformation occurred in the nineteenth and twentieth centuries. Those individuals who trained in a university for their specialization grew in size and, in many cases, developed their own "sub disciplines" within their original specialization (Freidson 2001:21).

According to Freidson (2001:17) professionalism "cannot exist unless it is believed that the particular tasks [professionals] perform are so different from those of most workers that self-

control is essential." Zhou's (2005) conception of "distinctions" follows this idea of unique occupational tasks. Freidson (2001:18) is primarily concerned with "occupational specialization: people performing only the bundle of tasks connected with a defined productive end in an occupation." The division of labour has increased over time and has resulted in occupations that are based on these specializations. There is a good reason why specialization emerged and exists today: because it works. Increased specialization increased productivity as individuals became better at one particular aspect of a job. This can be exemplified in the medical field as sub-disciplines emerged and individuals focused their studies on these specializations.

Freidson (2001:23) outlines two types of specialization: mechanical and discretionary. *Mechanical specialization* involves workers performing tasks that do not vary or require individual or creative thought, while *discretionary specialization* require "discretion or fresh judgment" and really call for examining each circumstance individually (Freidson 2001:23). In summary, mechanical specialization involves the use of common skills and knowledge gained from life experience, while discretionary specialization requires the use of a particular and distinct knowledge that is gained from formal education or training (Freidson 2001: 24). In terms of professionalism, discretionary specialization jobs require formal training, grasp of abstract concepts and the ability to recognize the individuality of each case (Freidson 2001:35). Professions are discretionary but it is far from a simple argument to relate these two types of specializations to occupational prestige. Mechanical specialization may involve the repetition of the same task over and over again, but the task may be incredibly complex or difficult to perform, for example, working on an automotive line or an accountant completing clients' taxes. While discretionary specialization may require the use of abstract concepts and tailored work to a specific circumstance, it may involve a complex task that is repeatedly or even mundanely

performed, for example, a plastic surgeon performing hundreds of similar surgeries may find that each is becoming increasingly "simple" to him or her. Each type of specialization has its own claim to prestige and it is not a simple matter to attribute more or less prestige to one or the other. The benefit to mechanical specialization is that the quantity of goods or services is much higher than discretionary specialization, however, discretionary specialization is much more flexible and allows the individual practicing to use some internal judgment and decision making (Freidson 2001:111). Professions fall under the discretionary type of specialization because of the decision-making basis to their work.

This division of labour or specialization can be seen today within professions. The medical field is an excellent example as sub disciplines emerge out of major areas of medicine such as pediatrics, surgery or disease-specific medical specializations. As each specialization emerges it simultaneously accrues a new level of prestige because fewer individuals have the knowledge to perform such work. The supply for such specializations is much smaller than the demand and results in greater compensation for those practicing this specialization, both in monetary and prestige terms. Timothy Morris (2000:149) outlines two types of knowledge: codified and tacit (see Appendix D). These two types of knowledge can be held by individuals or a collective group. Individual tacit knowledge stresses learning by doing; collective codified knowledge focuses on upward mobility and specialization. Collective tacit knowledge is the value of the organizational knowledge that cannot be taught, only learned (Morris 2000:146). Professionals fall under codified knowledge, but Morris (2000:149) describes how "most knowledge in these firms (professional service firms) is, in reality, tacit and contextual." This observation confirms that professions are restrictive to entry, in that they require extensive training in a very specialized field and learn through experience and from others in the

profession. This knowledge building through others keeps outsiders from breaking down the professional barrier to entry.

Historically, Max Weber viewed the division of labour as hierarchical and bureaucratic and, as a result, this led to a very rational method of organizing work (Freidson 2001:49). At the same time, this organizational hierarchy can be rearranged, but only by those in positions of authority (Freidson 2001:49). Emile Durkheim believed specialization was "not merely a functional necessity, but something positive in human life, something that stimulates the development of freedom and individuality" (Freidson 2001:52). Under this perspective of specialization, each group "controls the work for which it is competent, negotiates its boundaries with other specializations, and by that method determines how the entire division of labor is organized and coordinated…*This occupationally controlled division of labor is an essential part of professionalism*" (Freidson 2001:55).

In summary, occupational division of labour or stratification usually has very few different occupations within it, is stable in terms of shifting of occupational presence or needs, has a "medium" degree of differentiation and the specializations that occur within an occupation are often based on more individualistic cases or unique circumstances, rather than obvious divisions that would be widely understood or applied by the general public (Freidson 2001:60).

2.4 Losing Professional Status

Considering the new economy, professions should have increased in prestige in the last quarter century, but Goyder (2005) found with the Kitchener-Waterloo Metropolitan Area Survey a general decrease in the prestige of typically higher-prestige occupations, including

professions over the past 25 years. Further, there was an increase in the prestige of typically lower-prestige occupations.

In the Nakao and Treas (1994) data, many professions' prestige remained stable between 1964 and 1989. The minimal change in professional prestige observed between 1964 and 1989 is reasonable because society was not allocating greater prestige to more service-oriented work where many professionals exist today. What is surprising is the dramatic shift that Nakao and Treas observed in 1994 as society began to enter the new economic period. Nakao and Treas (1994) found accountants, biologists, chemists, physicians, elementary school teachers and nurses increased in prestige, while university professors and justice of the courts/judges decreased. Goyder and Frank (2005:13) found that professionals in social science, education and religion received greater prestige than their education levels would dictate. Evidently, income and education are not the sole drivers of occupational prestige. Forty years after the Pineo and Porter study, Goyder (2005) finds people shifting prestige perceptions much more quickly than institutions, shown through declining prestige of professions despite unchanged educational requirements.

This decline could have many explanations, but due to the subjectivity of occupational prestige measures it is difficult to determine one defining factor. Freidson (2001:193) suggests a decline may be the result of a profession focusing too much on the theoretical and abstract and not spending enough time on the pragmatic elements of the profession. This may be the case in more intellectually and university-research based professions. Increased public access to information and resources may aid the public and be one reason for a potential decline. The Internet has allowed the general public more autonomy in their health, business, finances and other areas. Freidson (2001:206), however, argues that most professional work is still too

specialized and complex for the general public to be able to perform this work alone, without the assistance of a professional. An over-credentialized professional workforce may leave the public not knowing or caring about the extent of education or training that professionals are required to undergo, and consequently, the public will not reward professions in terms of prestige. Regardless of sector, workers, employees and professionals must be more flexible to the demands of the public because public perception will impact professional status as Goyder (2005) argues. Professions continue to increase the number of specialties, perhaps as a way to keep ahead and retain their esoteric knowledge and monopoly over their discipline.

Prestige continues to be a reflection of what society values. This value is also dependent on individual experience and awareness. With the new economy, technology and shared knowledge offer opportunities for the public to take more control over the services rendered to them and whether they wish to perform these services themselves or outsource it to professionals. New technology and information sharing has opened many doors to the esoteric knowledge held by professions.

3. Contextualizing the Research, Part II: Gender and Occupational Prestige

> "No one ever told me that women would always be valued in proportion to the value we place on women's work. No one ever said that female physicians would never acquire the status of male physicians until secretaries are valued as highly as tool-and-die makers. No one ever explained that the father who needlepoints a birthday gift for his son must be accorded the same respect as the woman who wires her family cottage. But the status of women's work, I now know, is a measure of the value we place on women"
> (Colwill 2001:340)

Professions have gained female representation but have also lost occupational prestige over time. It is possible for both of these trends to occur independently, but the prevalence of stereotypes is frequently mentioned in the literature surrounding female representation in occupations that are typically performed by men. Tajfel (1969:422) defines a stereotype as "the general inclination to place a person in categories according to some easily and quickly identifiable characteristic such as age, sex, ethnic membership, nationality or occupation, and then to attribute to him qualities believed to be typical of the category." While professions now have male and female incumbents, stereotypes may influence those who respond to occupational prestige surveys. Coxon and Jones (1979:2) claim that the "'perception' of occupations might be more accurately described as studies of how people form concepts about the occupational world." Respondents may or may not feel that a woman is able to perform well as a lawyer, physician, or accountant but would do well as a registered nurse or teacher.

3.1 Gender and Occupational Prestige

My research examines whether the increased feminization of professions has impacted the prestige awarded to professions. Research performed over two decades ago showed that the increased representation of women in professions did not lead to a decline in prestige (Crino, White, and DeSanctis 1983). Twenty years later, we see that

gender of an occupational incumbent did influence the prestige rating attributed by respondents. When raters were given three different gender options under which to evaluate occupations, there was a perceptible difference in prestige outcomes. For instance, in a study where one group of raters was asked to rate occupations with male incumbents, one with female incumbents, and one with gender-neutral incumbents, the results showed that when raters were asked to rate a female nurse, it resulted in higher prestige than having a gender-neutral or male nurse (Goyder, Guppy and Thompson 2003). Although the prestige gap has shrunk between male and female incumbents in an occupation, the gender-specific occupations had higher scores on average than the gender-neutral scores (Goyder et al. 2003). Raters carried perspectives of what a gender should or should not be performing. This indicates that occupational raters do not turn a blind eye to the gender of an incumbent, rather, "images of jobs are actually images of people who hold those jobs" (Glick, Wilk, and Perreault 1995:565). This finding suggests that gender does influence public perception of occupational prestige and my research will examine whether a blind eye exists for professions in terms of prestige, as it seemed to in Crino et al.'s (1983) research.

3.1.1 Feminization of Professions

Women began entering the workforce at exponential rates several decades ago and they continue to increasingly enter the professions. In 1961, women comprised 5.4 percent of accountants and by 2001 they represented 52.8 percent, responsible for 61.1 percent of the overall growth in the profession in a 40 year period. Another example is that of veterinarians. In 1961, women represented 1.5 percent of all veterinarians and by

2001 they represented 47.7 percent; women were responsible for 53 percent of the growth in veterinarians over that time (see Appendix E).

Gender is considered to be an important aspect of this research because of its history, or lack thereof, in occupational prestige research. Originally, gender was not used as a variable because women were not in the labour market to any degree that would make their presence significant. As women began entering the labour force in greater numbers, researchers took gender into consideration and noted the low prestige of women in the workforce (for example, Blishen and Carroll 1978; Blishen et al. 1981; Boyd 1986). "Increasingly, women become a more prominent category, integrated in the text…however, publications devoted to examining women all too often merely insert…women in place of men, without transforming concepts to make them sex-conscious" (Armstrong and Armstrong 1990:130).

Factors such as the type of occupation may influence how people react when they feel an appropriate or inappropriate gender is working within that field, or neglect to take into account the heavy role that women also play at home. Researchers began to understand that gender was not simply a variable at play in occupational prestige, but also in terms of the access and type of education women were receiving and how they were being rewarded for this education in comparison to men. For instance, many women working in the same occupations as men have much higher education than those men (Public Agenda 2005). Gradually, as women were more consistently found in the labour force and entering typically male-dominated occupations the difference in prestige shrank. Survey respondents began casting off the idea of gender significantly influencing occupational prestige. Women have made inroads into the professions and including

gender in my research will investigate the effect of gender equality on the prestige of professions.

According to Statistics Canada's report *Women in Canada: Fifth Edition A Gender-based Statistical Report* (Statistics Canada 2006:133) all women over the age of 16 who were employed in 2003 only earned 62 percent of what males were earning. Although this does not distinguish what type of work, nor does it specify the difference between occupations and professions, it is still a reminder that women are not equally compensated in the workforce. Many factors contribute to this inequality, such as part-time versus full-time labour, location (for instance, practicing law within a corporation or firm, public or private sector), occupation, and the type of work being performed. The type of work that women perform can significantly vary and when it comes to professions, the male-female divide can be quite pronounced when examining a profession's internal stratification.

This same report also shows that in 2004, 67 percent of employed women were working in teaching, nursing, health-related occupations, clerical, administrative, and sales and service occupations, compared with 30 percent of men (Statistics Canada 2006:113). This information confirms that women are still working in what many would describe as typically-female or people occupations. Examples of people-occupations include nursing and teaching. These occupations are not renowned for their high respect or pay, but can be viewed as extensions of the caring and nurturing roles and stereotypes with which women are associated. Professions have, in general, become "feminized," so men may now decrease the prestige they attribute to all professions. As women are more highly represented among all professions in general and still command most positions in typically female-dominated professions, their gender representation

makes their presence less anomalies and women may give greater respect to all professions, specifically to female-dominated professions.

3.1.2 Gendered Skills: Nature versus Nurture

Are human beings driven solely by human nature or do cultural or social factors influence human behaviour? Nigel Nicholson (2000) argues in favour of a type of "co-evolution," where both human nature and culture and social forces are at play. An example of this nature versus nurture argument manifests into negative consequences for women's occupational prestige ratings. Nicholson (2000:55-6) describes an example of this debate, "it follows that, as we no longer inhabit the world for which we were designed, our new cultural designs will exhibit points of misfit or tension with our nature, with visible consequences in various social ills and disorders." This abstract concept is pulled into a visual form and can speak to the workforce paths of women and men.

For example, men and women may react differently and be treated differently based on stereotypes held by others. Nicholson describes this tension between nature and nurture. The first point is *motivation*, where an individual has goals and individually takes action based on opportunities (Nicholson 2000:56). For men, motivation includes the concept of "competitive dominance" or status, while for women; motivation is more relationally based (Nicholson 2000:58). The second point is *selection*. Organizations continue to have career tracks that guide their employees upwardly within the organization and these individuals are given a "role" upon entering the organization (Nicholson 2000:60). Men and women are given different roles based on their gender. The third point is *connection*, involving networks and individuals' access to them to gain addition knowledge. Networks are limited for women due to higher levels of

domestic responsibilities and intentional or unintentional exclusion from 'boys clubs.' Nicholson (2000:63-5) describes how individuals make more decisions based on perception, rather than concrete, rational decision-making. Also, if individuals receive negative feedback it prevents them from trying to be innovative or increase their mobility in the future. This three-point theory helps investigate the link between public perception of occupational prestige and the double standard and non-linear career experiences that women encounter. If women receive negative feedback, are guided into particular career tracks, and have limited access to networks, this will result in gendered roles within organizations and occupations and keep women in areas that those in power deem appropriate.

These stereotypes can be influenced by personal experience that respondents resort to when asked to rank occupations. For instance, individuals may have had a very positive or negative personal experience with a women lawyer which later drives their evaluation of lawyers' prestige. Generating stereotypes of individuals or occupations is a complex activity as individuals gather information from a variety of sources. The same can be said for occupational prestige ratings. Coxon and Jones (1979:3) describe the combination of "what social roles or social institutions are involved in the transmission of occupational information and how formal structures compare with informal systems (such as friendship networks) in getting information (whether it be valid or invalid) to the individuals" in developing a stereotype. Occupations that are typically held by men or women may experience stereotyped ranking where characteristically male occupations that are held by women may see a decline in prestige (see Hypothesis 5). Feminine characteristics are not typically rewarded monetarily, but are seen as natural, or a necessity.

Catalyst, Inc. (2007) reports that women who act consistent with gender stereotypes are seen as too emotional or "soft" and those who counter that stereotype are seen as too aggressive, women must also work more than men to achieve the same recognition, and when women are skilled at their jobs they are seen as unfriendly and are disliked. These gender stereotypes are fixtures in the work environment that women must address with to negotiate success. In a *Globe and Mail* article, "Why some women just can't fit in", Barbara Moses (2006a:C1) believes that this ability or inability to "fit" into a corporate atmosphere is linked with gender because the "range of acceptable behaviour is more restricted for women than it is for men." She goes on to explain how extroverted men are "outgoing", while extroverted women are "over the top" or "too much" and introverted men are seen as "thoughtful," while introverted women are described as "not a team player" (Moses 2006a:C6).

Heilman et al. (2004) argue that women are not present in senior positions within corporations because they are assumed to not possess the characteristics necessary to be in these roles, such as aggression, independence and decisiveness. More senior roles are thought to require more masculine traits and those typically associated with women, such as cooperation and understanding do not match up. It is very difficult for women who have dreams and ambition. Anna Fels (2004) believes that women who have ambition require recognition and mastery in order to follow through with their aspirations. Women are less likely to receive recognition and congratulations on their achievements and, as a result, they are less likely to continue to strive for more, making them appear "less committed" than men (Fels 2004).

Skills have been identified as male or female and are thus reflected in the occupations that men and women find themselves in where "the nurturing and caring more commonly required in female-dominated jobs were defined as biological capacities women received at birth

rather than as skills to be recognized and financially rewarded" (Armstrong 1993:136). According to Armstrong (1993:137), men's work is strongly linked to profit. Armstrong (1993:136) continues by describing how women's work has become a "secondary labour force because their first commitment was understood to be home and the family. Their labour force work was seen as a matter of choice, largely reflecting preferences of particular kinds of women and matching their particular womanly skills." My analysis will examine the influence of women entering professions, the dispersion of women across professions, and the influence of a profession being female or male dominated has on prestige ratings.

3.1.3 Data vs. People-complex Professions

Categorizing occupations by gender may no longer be the dominant practice; however, there is still evidence to suggest that incumbents are being granted prestige based on the gender-appropriateness of their occupation. In 1977, Guppy and Siltanen (1977:322) reported that both men and women employed in female-dominated occupations had low occupational prestige scores, but women experienced higher individual esteem within these occupations because they were employed in "sex-appropriate" occupations. Twenty years later, Hauser and Warren (1997:212) suggested that women working in typically female occupations may be compensated in prestige rather than money for being in a sex-appropriate occupation, "secretaries and teachers are prototypical women's jobs, paid more in prestige than in dollars."

An occupational prestige label will present real consequences for individuals, validating the examination of prestige of people versus data-complex professions. A newspaper article in *Public Agenda* (2005:7) reported that women chief executives in Britain's top charities earn more than their male counterparts. The interesting aspect of this finding is that, excluding chief

executives within the charity sector, men out-earn women (*Public Agenda* 2005:7). Top women are paid more in typically female work; however, overall, men continue to earn more than women. I intend to examine whether there is a prestige difference between professions that work primarily with data-complex tasks and those that work primarily with people-complex tasks.

People-complex occupations are usually associated with women. Stereotypical traits for women such as nurturing and kindness often lead to the assumption that women are better suited for working with people. Many people-complex occupations, such as teaching, nursing, sales and service are female dominated and are low prestige and low earning positions. Given the new economy's push to innovation, promotion and use of technology, it would seem that those occupations that work primarily with data would receive greater prestige than those working with people (see Hypothesis 3 and 4). The roles within professions result in real consequences for their incumbents and when gender divisions exist these can result in differences in prestige, respect, and earnings.

3.1.4 Sex Segregation and Internal Stratification

The idea that men and women belong in different occupations because of their different skill sets has resulted in what is referred to as "sex segregation" in the work force. According to Reskin and Hartmann (1991:268), the "segregation index, measures the degree to which the distributions of the groups being studied (women and men) across a set of categories (occupations) differ from each other. Such a measure implies a goal of complete integration, with the proportions of women and men within every occupation identical to their representation in the labor force as a whole." Another consideration is the segregation occurring within one profession alone, and not simply among professions. Often women and men in the same

occupation are asked to perform different tasks or hold different responsibilities which vary in monetary compensation or access to important information, training or advancement opportunities or limit networking. The result is the tendency for women to work in professions that accrue lower occupational prestige.

Reskin and Hartmann (1991:266) commented that

> "The overall degree of sex segregation has been a remarkably stable phenomenon; it has not changed much since at least 1900. This stability is surprising in light of the enormous changes that have taken place in the structure of the economy: the turnover in occupations as obsolete occupations disappear and new ones develop; the narrowing of educational differentials between men and women, particularly since World War II; and, most recently, the increasing similarity in the work patterns of men and women over their lifetimes."

Looking at the legal profession again, women are much more likely to be found in family rather than corporate law and this can affect their level of prestige and pace of advancement or mobility within a firm (see Hypothesis 7). In a report to the Law Society of Upper Canada (Kay, et al. 2004:23) it was found that in 2002, the top three legal fields for men were: civil litigation (19 percent), real estate (17 percent), and corporate and commercial (14 percent). While the top three legal fields for women in 2002 were: other (23 percent), family law and divorce (18 percent) and corporate and commercial (11 percent) (Kay, et al. 2004:23). Further, men were more highly represented in the upper gross annual earnings. In 2002, 18 percent of men and nine percent of women earned more than $300,000 and 20 percent of men and 23 percent of women earned between $60,000 and $99,999 (Kay, et al. 2004:27).

In response to issues in the practice of family law raised by judges, consultants, and lawyers, a task force was introduced to investigate this area further for the Canadian Bar Association's 1993 *Touchstones for Change: Equality, Diversity and Accountability* report. According to the report, family law "has little 'status' and consequently, family law lawyers have

little status in the profession" (The Canadian Bar Association 1993:203). For a lawyer to have status, he or she must have an adequate income and enough resources to effectively perform legal duties. However, family lawyers usually have lower rates and delayed payments which result in lower incomes (The Canadian Bar Association 1993:203). One woman described her experience practicing family law, "I am never allowed to forget that I am not a 'real lawyer.' The senior lawyers in my firm do not respect my practice." (The Canadian Bar Association 1993:205). Finally, those in family law felt that is was more difficult to advance to more senior positions (The Canadian Bar Association 1993:207). These findings show that more women practice family law and reveal how those practicing in this area experience low status, low income, and limited ability to advance.

The discrimination many women face in the legal field prevents them from gaining the prestige that male lawyers reap. The women lawyers in McKenzie Leiper's study reported subtle forms of discrimination that prevented them from ascending what might be termed a 'prestige ladder,' for instance, in law school women found discrimination within test wording and how they were being channeled into a particular type of law (i.e. family law) (McKenzie Leiper 2005:249). Through interviews with women lawyers, McKenzie Leiper (2006) found that subtle behaviours and actions on the part of more senior partners limits women's advancement, for example, not allowing women access to important files, not giving them significant cases, excluding them from networking in 'boy's club' atmospheres, and other gate-keeping strategies.

An examination of the internal stratification within the legal profession is possible through the use of the *1995 Chicago Lawyers Survey*. This survey was replicated from a 1975 survey, allowing for examination of lawyers' perception of different types of law practice. Andrew Abbott's (1988) "professional purity" thesis suggests that the more professions are able

to simply perform the tasks they are trained to do without having to develop relationships or translate professional jargon to clients, the purer the profession. Professions that require extensive interaction with people must devote more time to developing relationships, and decoding processes is considered less pure and, consequently, less prestigious. For instance, family lawyers must often take the time to explain the regulations and processes to individuals who are unfamiliar with the protocol, while corporate lawyers deal with clients who can be very familiar with the practice.

Summary

Contemporary literature suggests that the prestige discrepancy by respondents is not gender related and I intend to examine this suggestion more fully using occupational prestige data over a 40 year period. To summarize, my research will examine the occupational prestige of professions in Canada. The decline in occupational prestige in the last 40 years will be examined based on the emergence of the new economy and how well professions fare within this template of higher education, knowledge-intensive and huge economic growth. Further, more women can be found in these professions today than ever before and it will be important to consider the impact they have on the professions and, consequently, their occupational prestige. Women are still associated with typically-female occupations because of stereotypical traits they are assumed to possess. It is important to examine this gendered thinking in the context of professions.

I intend to explore whether differentiation among feminization of professions and people-complex professions exists, and is shown through occupational prestige ratings. From previous literature on distinctions between areas of law (see Kay, et al. 2004 and The Canadian Bar Association, 2001), internal stratification can have a significant impact on individual status within a profession. My project will explore the prestige differences among law incumbents in

different fields. The influence of internal stratification operates below what the public generally sees and may have compounding effects on existing inequalities.

If these mainstream values of the new economy of higher education and knowledge-intensive workforces prevail, then the professions should be increasing in occupational prestige rather than languishing as recent research has shown (Goyder 2005). These concepts are intended to guide the examination of the relationship between the new economy and occupational prestige of professions where we expect professional prestige to increase, but find the opposite.

3.3 Hypotheses

The new economy is becoming increasingly integrated into and important to all levels of the workforce and professions show a strong connection to its traits. This gives reason to question why, as the new economy expands and advances and infiltrates our society, professions have experienced a relative decline in their occupational prestige over the past 40 years. From previous research we see an increase in female representation and an overall loss of occupational prestige among professions and I will try to draw a correlation here through my analysis. The increase in and emphasis on technology with the new economy leads to investigating relationships between the use of data and prestige. From Alexander's (1972) research, we know that individuals assign status based on where they fall on a status scale. To investigate this concept, I will examine a possible correlation between the education and income levels of individual raters and the level of prestige they give to professions. Individual rater education and income levels are controlled for within regression modeling to make the 1965 and 2005 samples more equivalent. Finally, the gender differences occurring within the legal profession based on practice area are linked to overall prestige level differences by area. The hypotheses outlined below will be tested by examining overall title-level analysis of occupations by the public, the

demographic makeup of survey respondents, and the influence of gender-dominance in professions.

H^1: Professions gaining in mean education level between 1965 and 2005 gain prestige.

H^2: Professions gaining in mean income level between 1965 and 2005 gain prestige.

H^3: Professions increasing in complexity or sophistication of data use between 1971 and 2001 gain prestige.

H^4: Professions increasing in complexity or sophistication working with people between 1971 and 2001 lose prestige.

H^5: As more women enter professions the prestige of these professions declines between 1965 and 2005.

H^6: Between 1965 and 2005, women increase the prestige they allocate to professions, especially female-dominated professions, and men decrease the prestige they allocate to these professions.

H^7: Men and women will not be represented equally across legal areas and those areas of law where with a greater representation of women will have lower prestige scores.

My research will explore what factors are causing an unexpected decrease in the prestige of professionals in relation to other occupations when they mirror the components of the new economy so closely and should therefore experience increased prestige. Analysis will show whether there is a loss of prestige for more feminized and people-complex professions.

4. Methodology

Abstract concepts, like occupational prestige, are particularly difficult to measure. Most research of this kind does not ask respondents to indicate their criteria when determining occupational prestige. It is a subjective measurement that cannot be validated mathematically or scientifically, except to the extent that raters agree on the prestige appropriate for occupations. Considering validity can help research present information that more accurately measures the theoretical. One tool is construct validity which attempts to understand theoretical concepts, "by developing constructs and hypotheses that can be tested and measured" (Kirchgassler 1991:287). Occupational prestige is one construct that can encompass perceptions of respect, education, income, and other characteristics into a measure to be tested as occupations having more or less of this prestige or reputation.

Goyder and Frank (2005:20) believe that the "income and education for occupations is partly socially defined," and therefore it is important that a study of prestige accept rater bias, disagreement and errors. Income and education are socially constructed and based on public perception because neither is standardized across particular professions by level, gender, or minority group and as a result they are left open to varying interpretations and perspectives. Considering this and recognizing the impossibility of removing all bias, the theoretical conception that rater bias and idiosyncratic behaviours regarding occupational ratings provide a more realistic and accurate portrayal of the public opinion, they are retained in the analysis. In the case of occupational prestige, a scale of one to nine (one being low and nine being high prestige) provides some structure for an abstract concept in order to test and measure public viewpoints. Valuable insight regarding the occupational prestige of professions can be derived from the examination of public ratings.

The analyses of the three data sets that I use are based on my belief that occupational prestige is a useful measure of public perception of occupations and that this measure contains rich data that are not always captured when an individual is asked to assign value to something on a predetermined scale. Other influences that I am not exploring may also play a role in acquiring a job, such as: nepotism, prestige of school, and self-presentation.

The data sets used in the analysis are derived from both national and local surveys and ask for the social standing or prestige of occupations without providing any prompts as to what type of information the respondents should be considering when ranking or rating occupations. The intent of this project is to examine the public's perception of professions, allowing respondents to use whatever criteria they consider when making the ranking decision. I believe that respondents' subjective choices, preferences, and respect are what will ultimately drive the future of the professional economy.

4.1 Methodological Orientation

My research, while recognizing the benefits of qualitative work, restricts itself to quantitative methods. This approach is in the interest of data availability, time and most importantly, the recognition of gender as one element potentially contributing to occupational prestige discrepancies among professions. The data are captured in a measurable scale alongside the underlying subjectivity of prestige perceptions. It is important to recognize other approaches and opinions on how this type of research could be conducted. Feminist theorists argue that examining anything related to gender should be done using qualitative research methods. For example, Armstrong (1993:144) states that feminists want to "let women speak for themselves" and that it is more of an "exchange" than with quantitative methods. Another feminist scholar Mossman (1993: 159) believes that to truly understand women's experiences we must use the

participant/observer approach because "women may experience the legal profession differently from men because societal expectations of behaviour appropriate to the roles of men and women still differ in significant ways…that the environment within which women lawyers work, and especially their experiences with (male) colleagues, may strongly affect their perceptions about whether gender is an issue for the legal profession." This idea of using the participant/observer approach again refers to the idea of letting women speak for them and that each woman's experience may be different. Although Mossman (1993:163) supports a "contextual, focused on meaning, collaborative and self-reflective" approach to researching gender, the current research project has a focus on occupational prestige, using gender as one aspect of this broad concept. Utilizing a scale to measure allows the analysis to be measured to show any gender influences.

4.2 Included Professions

4.2.1 NOC Code Description

Pineo and Porter's (1967) list of professions and semi-professions, and general social trends guided the selection of the professions for my analysis. In order to capture an understanding of the change in occupational prestige over time, it was important that I select professions that had been analyzed in a similar way. All of Pineo and Porter's (1967) "professions" are included in my selection except for "economist" due to the complexity of understanding true levels within the business/management category, and "mining safety analyst" because this designation was unavailable in the 2005 data. The "semi-professionals" that I selected from Pineo and Porter's (1967) list are those that I found to carry the characteristics of other professionals in the literature and those who were easily found within the NOC system. Several of the semi-professionals such as "author" or "T.V. star" could have encompassed too

many different levels of education, income and skill for me to have a good understanding of their place within the NOC system.

Using the NOC (as of 2001), each profession is elaborated on below in terms of some examples of main duties, educational requirements, certifications, credentials and skill level required to enter an occupation today. An overview can be viewed in Appendix F. The requirements of professions have inevitably changed over the past 40 years but a broad understanding of the responsibilities and level of training can be captured by the NOC classifications. Lawyers and registered nurses receive a more extensive examination as examples of professions where gender has played a dominant role in the demographic of each profession and has influenced its development over the past 40 years.

All of the professions, with the exception of "airline pilot," are in the highest skill level (Level A) and they are found in the Business, Finance and Administration, Natural and Applied Sciences, Health, and Social Science, Education, Government Service and Religion industry sectors. No professions fall into the more industrial/manufacturing and trade sectors where occupations are typically of a lower skill level and do not require higher levels of education and credentials. Overall, professions have specialized research, deal directly with human life or environments influencing human life and require education beyond the secondary level, including further certification.

Accountants are typically responsible for preparing financial information for individuals, departments, or companies, examining and preparing records, and developing and reporting control procedures. A university degree, professional training program and two years or 30 months of on-the-job training are required.

Airline pilots were considered to be a semi-profession by Pineo and Porter (1967) and I include them in this category as well. Pilots are in skill level B but are included in this analysis to track whether the United States September 9/11 event has increased the importance, respect or social status of this profession given how directly responsible they are for protecting human life through their work and the increase in air travel since 1965. Airline pilots transport passengers and freight, provide search and rescue, surveying and spraying and crop dusting services, and direct activities of aircraft crew. Pilots require secondary school and graduation from a certified flying or aviation school. A university or college diploma may be required.

Architects consult with clients to determine primary factors going into a new building or renovation, conceptualize and design buildings, prepare plans, determine materials, and determine cost and construction schedules. A bachelor's degree, three-year internship, and an examination are required.

Biologists plan and conduct studies and experiments, conduct impact studies and prepare reports, and study, identify and classify specimens. A bachelor's degree is required. For a research scientist a master's or doctoral degree is required. Chemists analyze, synthesize, purify, modify and characterize chemical or biochemical compounds, develop and conduct programs of analysis, collect sample data and analysis, research to develop new chemical formulations and processes as well as new technical applications of chemicals. A bachelor's degree is required. For a research scientist a master's or doctoral degree is required. Physicists design and conduct research in experimental and theoretical physics, analyze data and prepare reports, participate on research or development teams in designing experiments, equipment, and procedures. A master's or doctoral degree is required.

Catholic priests and Protestant ministers provide spiritual and moral guidance, supervise, plan and administer religious education, conduct religious services, and administer rites such as marriages and funerals. Priests require a college degree or other program in religious studies and may also have a master's of divinity degree.

Chiropractors take patient history, conduct examinations, diagnose neuromuscular-skeletal disorders, and treat health disorders, advise patients on exercise, nutrition, lifestyle. Two years of university, four or five-year program at accredited institution and board examinations are required.

Civil engineers conduct, plan, and design civil projects, evaluate and recommend appropriate building and construction materials, and conduct feasibility studies, economic analyses, and environmental impact studies. A bachelor's degree is required. Mining engineers conduct preliminary surveys and studies of ore, mineral or coal deposits to assess feasibility of potential mining operations, determine means of safety, and design shafts, ventilation systems, and mine services. A bachelor's degree is required.

Computer programmers are included within my set of professions because of how prevalent technology has become in everyday use. Once used by a select group of individuals, computer technology is now used by the average person and is not as inaccessible and elite as it was in 1965. To understand potential change in respect garnered, and the social status of this type of work, computer programmers are included in my analysis. Computer programmers write, modify and test software code, identify and communicate technical problems, processes and solutions, and prepare reports and manuals on operation and maintenance of software. A bachelor's degree is required.

County court judges or court judges preside over courts of law, interpret and enforce rules and make rulings regarding the admissibility of evidence, weigh and consider evidence, and decide the legal guilt or innocence or degree of liability of the accused or defendant. Judges require extensive experience as a lawyer or as a professor of law. Lawyers advise clients of their legal rights, research legal precedents and gather evidence, plead clients' cases before courts, draw up legal documents and negotiate settlements. Two or three years of undergraduate studies, a bachelor's degree from a recognized law school, completion of the bar examination, and a period of articling are required.

Elementary and high school teachers prepare courses, lead students in activities, prepare, administer and correct tests, and evaluate the progress of students. A bachelor's degree and provincial teaching certificate are required.

Pharmacists check prescriptions for proper dosage, compound prescribed products by calculating, measuring and mixing, and dispense pharmaceuticals to customers. A bachelor's degree and practical training under supervision are required.

Psychologists examine and assess behaviour, diagnose disorders, counsel and provide therapy, help clients manage illness, plan intervention programs, and apply psychological theory regarding behaviour and mental processes. A doctoral or master's degree, examination for professional practice and experience are required. Social workers interview clients to assess problems and determine appropriate services, provide counsel and therapy to assist clients in developing skills to resolve their problems, plan programs of assistance, and develop or advise on social policy legislation, conduct social research and assist in community development. A bachelor's degree is required.

Physiotherapists assess patients' physical abilities, establish treatment goals, plan and implement programs, evaluate effectiveness of treatment, maintain clinical records and confer with other health professionals. A university degree in physiotherapy and supervised practical training are required.

Professionally trained librarians recommend the acquisition of books, periodicals and audio-visual media, provide reference services, select, classify, and catalogue library materials, and develop systems to access library collections. A master's degree in library science is required.

Physicians examine patients and take histories, prescribe and administer medications and treatments, perform and assist in routine surgery, and inoculate and vaccinate patients. A bachelor's degree, graduation from an approved medical school, two to three years of residency training, and completion of qualifying examinations are required. Registered nurses assess patients to identify interventions, collaborate with members of an interdisciplinary health team to plan, implement, co-ordinate and evaluate patient care, administer medications and treatments, monitor, assess, address, document and report symptoms and changes in patient health, and assist in surgery. Completion of a university, college or other approved registered nursing program is required.

Mathematicians conduct research and apply mathematical techniques to the solution of problems in scientific fields. A graduate degree is required. University professors teach subjects to undergraduate and graduate students, prepare, administer and grade examinations, assignments and reports, conduct research in field of specialization and publish findings, and direct research programs of graduate students. A doctoral degree is required.

Veterinarians diagnose diseases or conditions in animals through physical examinations or laboratory tests, treat sick or injured animals by prescribing medication, setting bones, dressing wounds or performing surgery, inoculate animals, and advise clients on feeding, housing, breeding, hygiene and general care of animals. A four-year university degree in veterinary medicine and national certification examinations are required.

All of the above occupations are included in my research because their work duties, skill level and training are typically higher than those of the average occupation and because many have a direct impact on the health and well-being of the public. Social trends toward a healthier and safer environment for individuals and the ubiquity of technology make many of these professions important to track in terms of changes in prestige over time. The high skill levels and general skill areas of the chosen professions allow my analysis to focus not on the skill level but on the change occurring within these high status professions over time and what specific factors have contributed to that change.

4.2.2 Commentary on Included Professions

Based on the available data sets, it was important to state a core set of professions and semi-professions that would be used in the analysis. Refer to Chapter One for the decision-making process for determining what constitutes a profession. Professional selection began with determining the extent to which professions could be standardized across the available data sets, to serve as a common denominator. In other words, occupations considered to be professions were then selected if they appeared in all data sets to ensure consistent analysis. Twenty-two professions and four semi-professions resulted. See Appendix G for the full list. The constantly evolving nature of occupations and their requirements and responsibilities make it difficult to

clearly differentiate between professions and other occupations. The following dialogue outlines and explains more difficult decisions.

Management is excluded from the present analysis because the label only offers a vague idea of occupations' level of responsibility and necessary skill set. Although managers may have a professional background, it is impossible to determine this information from the available data, as well as differentiate the vast range of necessary skill levels and training periods. Further, the NOC does not provide enough detail to clearly distinguish these different levels and training requirements. For instance, the difference in responsibility and training between a retail store manager and the manager within a major corporation is incomparable. Aside from accountants who have clear professional status and associations, the NOC Professional Occupations in Business and Finance category contains a vagueness that makes classifying any business or managerial occupation as professional or non-professional very difficult. For example, occupations such as economists and financial analysts exist at different levels of responsibility and require different types of knowledge. I have excluded managerial occupations due to the problematic nature of differentiating among them.

An article in the *Financial Post* (Waisberg 2006:SR1) gives some insight into MBA programs and degrees and adds to the decision to exclude management occupations from the present research. Most pertinent to my research, surveys show that MBA holders make more money on average, but it varies extensively (Waisberg 2006:SR12). Management positions vary so drastically in income, prestige of school and actual job requirements and responsibilities that they cannot be standardized with the available data.

Computer programmers have been included to observe their general trend as a 'hot' information technology career. While thirty years ago a computer programmer was a new and

trendy occupation that required expert knowledge, due to an explosion of technology and a high demand for this type of work, it is no longer as elite or specialized. The flexibility to work in any industry, at a variety of levels makes computer programming particularly difficult to distinguish in terms of its level of expert knowledge and responsibility. Further, the average individual is much more computer savvy now, eliminating some of the associated esoteric knowledge held by computer programmers. Computer programmers serve as a profession to track change in occupational prestige over time that has witnessed technological and social change.

The NOC has a category for Professional Occupations in Art and Culture. Aside from librarians, these professions have been excluded because writers, creative and performing artists often do not have professional or standardized training, and given the data sets available, it is impossible to determine the extent of their professional training and be able to control for this training in analysis. This decision is made based on a lack of available detail in the data, despite the fact that many of the individuals working in these occupations may have extensive formal and informal education. Librarians, on the other hand, have achieved a professional status. Today librarians are required to obtain a degree beyond the baccalaureate, a Masters of Library and Information Science, considered advanced specialization. This advanced education and their association, the Canadian Library Association, contribute to their professional status that already contains a sense of community, autonomy, and sense of service to the community.

Educational professions including "elementary school teacher," "high school teacher" and "university professor" are included in the data set because, much like librarians, educators have been long-standing occupations and they have associations and a sense of community.

While a profession usually requires extensive education, theoretical and expert knowledge, autonomy, commitment, sense of community and service, a code of ethics and

relevant social values (Pavalko 1971; Rossides 1998; Rothman 1998), some professions escape some of these traits. For instance, although engineers do not require more than a baccalaureate they are considered professionals. The reason that engineers are included as professionals in the current project is that they must meet rigorous and demanding admission criteria and educational standards. Further, engineering is a very structured, regimented and specialized university program that is ultimately geared toward graduates' professional association and accreditation.

Some occupations are considered to be "academic disciplines," but can be argued to be professions. Mathematicians have attained an advanced degree and therefore lie closer to the professional end of the occupation-profession continuum. This academic discipline is not limited to a university setting and, in the line of thinking for this project; do not differ from a chemist who works for a pharmaceutical company, outside the university.

The nursing field is an example of an occupation that has been dominated by women and has been pushing for more professional status over the past 40 years. The debate over whether nursing is truly a profession is outlined in Hiscott's (1998) book *Career Paths of Nursing Professionals: a Study of Employment Mobility*. Nurses were originally trained in hospitals but now a post-secondary degree is required and university degrees are becoming more common. While nurses in the 1965 sample used in my analysis would not have had university-level training, in 2005 some nurses may have college or university-level training. The level of education even within this one profession has shifted dramatically over a 40-year period and this may be the case for other professions in the sample. Although nurses may not have been considered full professionals in 1965, many nurses in the 2005 sample may have post-secondary training giving the profession higher educational requirements that enhance its professional status.

The demand for and environment of nurses has been linked to their upward mobility. According to Hiscott (1998:23,28), fewer nurses work in hospital settings now due to the downsizing of hospitals and more nurses work in alternative settings such as community health and homecare. Nurses have limited opportunities to move upward in terms of management but a shift in environment can offer a status increase (Hiscott 1998:25, 111). In Hiscott's (1998:124) research, the homecare and self-employment fields have seen the largest increase in number of registered nurses.

Nursing is arguably only a semi-profession when the environment or setting that a nurse is employed in is taken into account. For instance, Hiscott (1998:4) outlines F.E. Katz's argument that in hospitals nurses are not full professionals because they hold lower status and take direction and orders from physicians who are higher on the health-profession hierarchy. Nursing continues to be female-dominated, thus resulting in more part-time work and incumbents being viewed as less committed to their work (Hiscott 1998:4). The medical field in particular, is highly specialized and segregated. Nurses, despite their education, sense of community and commitment, service and importance to social values, are still under the direction of physicians in hospital or clinic settings. Freidson (1970:66) felt that nurses could not achieve full professionalization until they "escape subordination to medical authority, it must find some area of work over which it can claim and maintain a monopoly, but it must do so in a setting in which the central task is healing and controlled by medicine."

M. Kinnear (in Hiscott 1998:5) argues that nursing is a true profession in that nurses have all of the elements typically found in professions (for example, a governing body, higher education/training, work related to social values, a service motivation and a sense of community) except for "professional autonomy." According to this argument, lacking autonomy is

insufficient to disqualify nurses from being considered a profession (Hiscott 1998:5). Hiscott (1998:6) uses the term "nursing professionals" to refer to both registered and practical nurses.

These arguments, terms and history lead me to include nurses as professionals. Hiscott's (1998:186) analysis demonstrates the complexity involved in trying to understand all factors in the vertical mobility of nurses, such as setting/environment and positions. A similar complexity is likely to be the case for many, if not all professions and the mobility of women within these fields. Measuring the change in occupational prestige of professions over time and the increase or decrease of women is one aspect of the complex matrix of factors contributing to the mobility of women in professions that my research examines.

My analysis contains a handful of what Pineo and Porter (1967) classified as semi-professionals to understand shifts in prestige over time which may result in viewing what were semi-professionals as full professionals. Based on Hiscott's (1998) research on the nursing profession's educational advancement and greater opportunity to work outside of the more hierarchical hospital setting, as well as the high skill level NOC code, I am including registered nurses in my analysis.

Although generally considered professionals, pharmacists are pushing even further for more professional status. According to an article in the *National Post* (Weeks 2006:A6), more and more pharmacists want the "power to prescribe drugs without a doctor's consent". This ability would grant pharmacists even more power and autonomy from doctors. Further, it would expand their tasks and responsibilities. Howard May, the Alberta Ministry of Health and Wellness spokesman said that this move is to "allow medical professionals to practice to the full scope of their training" (Weeks 2006:A6). There are some concerns about allowing pharmacists to have this added responsibility to their current workload. Wendy Armstrong, a board member

of the Consumers' Association of Alberta describes how pharmacists have served the purpose of ensuring that what doctors are prescribing is suitable, but if pharmacists are granted this privilege of prescribing no one will be monitoring their actions (Weeks 2006:A6). Further, she mentions the potential economic gain for pharmacists that is a part of their job may tempt them to over-prescribe or abuse their position (Weeks 2006:A6). Trudy Holzmann (Weeks 2006:A6), the president of the Alberta Pharmacists' Association disagrees that pharmacists will abuse this new privilege when she states that "pharmacists are professionals…they work under a code of ethics and a code of conduct. As any professional would, [pharmacists will] only be making decisions in the best interest of the patient." Again, the concept of service to others is used as an aspect of professionalism. In order to retain their professional status and keep it high, professions must continually strive for greater power and autonomy.

Four semi-professionals are also included in the analysis: social workers, registered nurses, physiotherapists and airline pilots. These are considered semi-professionals in this analysis and by other resources (see Pineo and Porter 1967; Rossides 1998; Rothman 1998) because they have some professional elements and are working towards full professionalization. These semi-professions require specialized training or education, service to the public, and a sense of community. They also have professional associations and codes of ethics. For instance, social workers now require a Masters of Social Work and have their own association with a code of ethics to guide their work.

Based on readings and decision rules (see Pineo and Porter, 1967; Pavalko, 1971; NOC coding) and my analytical requirements the final profession list includes the following professions: accountant, architect, biologist, Catholic priest, chemist, chiropractor, civil engineer, provincial or superior court judge (or county court judge in 1965), high school teacher, lawyer,

mathematician, mining engineer, pharmacist, physician, physicist, professional librarian, Protestant minister, psychologist, public grade/elementary school teacher, university professor and veterinarian. The semi-professionals included in the analysis are: airline pilot, physiotherapist, registered nurse, and social worker. Computer programmer is included to track its prestige over time because it is so heavily influenced by technology.

4.3 Commentary: Consistency among Rater Response

Increased equality and desired parsimony may have tempted researchers to, once again, conceptualize occupational role as a meaningful representation of all individuals within occupations. A lack of consensus between a rater's response and the public, or the status an occupation may objectively deserve (based solely on income and education) and that which it receives, opens up the potential for diverse scores. Although the functional relationship connecting education, occupation and income was much stronger and fixed when early socioeconomic status scales were constructed, a certain level of education is necessary to enter particular occupations, and skill demonstrated within occupations is assumed to be reflected in incumbents' income.

My research is a deliberate selection and focus on one section of the labour force, the professions, because of their notable similarities with characteristics evident in the new economy. Despite Hauser and Warren's (1997) seemingly diminished gender bias, occupational socioeconomic status still seems to be initially derived from gender or a form of social status. The problem with utilizing the income and educational characteristics for the total labour force is that these characteristics are still not absolute, in the sense that women, men and visible minorities have different income and education even within the same occupation. Two similarly-

educated individuals of different genders will not necessarily gain entrance to the same occupations, level of occupation, or be remunerated for their education equally. The value placed on education is not standardized and presents the potential of being inflated or deflated in value based on gender. Occupational status appears to be judged based on its incumbents first and on (gendered) skill level second. Hauser and Warren's (1997:190) description of how "prestige scales behave roughly as if they were error-ridden measurements of the socioeconomic status of the occupations held by fathers and sons" suggests the existence of gender-biased prestige and socioeconomic status, and yet promotes a return to more "objective" socioeconomic status measures. This may reflect a desire to return to measures of the average prestige awarded to occupations without consideration of the incumbent's characteristics and differences in socioeconomic status. Occupations are not objectively evaluated by socioeconomic status measures based on value to society, but on incumbents' value to society.

Previous researchers insisted, from a functionalist standpoint, that prestige was embedded within the collective conscience (Guppy 1982:1178). In 1982, Guppy made an attempt to test whether occupational prestige ratings were consistent across society. Guppy's work fit the popular individualistic theorizing of the time that anticipated individual's unique characteristics to impede occupational prestige consensus. From this research, Guppy (1982:1182) concluded that occupational prestige differed depending on social class and he suggested that "consensus in prestige studies might still be figments of theoretically different sociological imaginations." The traditional functionalist theory that insisted the public held similar occupational evaluations, and individual analysis was unnecessary, was fading.

Continued existence of inequality prompted Goyder (2005:18) to encourage the exploration of individual perceptions of occupational prestige because "people living in a culture

may absorb and synthesize the consequences of social change for an occupation faster than the social institutions that control educational preparation and income rewards do." While advocating for the inclusion of individual subjective occupational evaluations, Goyder (2005:18) retained the idea that "as with almost all soundings of the culture of a society, there is a certain amount of variation from one person to the next, but that does not argue out of existence the culture itself as a composite, negotiated at least in part by social osmosis between groups." Supplemental individual and subjective evaluations of occupational prestige were regarded as important, but investigation of objective and aggregate prestige evaluations was still considered imperative to prestige scaling.

My research looks at both title-level analysis and rater-trait analysis of professions' prestige to capture both the general consensus as well as the potential variation in public opinion depending on demographics. Teasing out the public's occupational prestige scores is one way of bridging the purely quantitative and purely qualitative approaches to studying an occupation's worth.

4.4 Prelude to Formal Analysis: Cognitive Interview Findings

4.4.1 Public Perception

To provide a context to my research, in the summer of 2006, I performed an informal, miniature survey with 15 participants asking them to rank professions in a similar fashion to how surveys of occupational prestige were performed. My sampling technique was not attempting to achieve a random sample but was methodologically adequate for attempting to grasp an understanding of public perception of social status and prestige. Respondents were equally represented by gender and their ages ranged from mid-20s to early 60s. I asked participants to sort cards with 26 professions printed on them in any way they felt was appropriate. The

participants could create as many or as few piles as they felt were appropriate. The number of piles ranged from two to eight. The participants were then asked what criteria/criterion they had used to sort the piles. The most common responses were: sector or type of work, educational requirements, desirability, and nature of services provided.

As an attempt to mirror Goyder's (2005) question of whether individuals still have an understanding of and meaning for the term "social status," this survey asked participants to provide definitions for occupational prestige and social standing, in an attempt to learn if individuals felt that there was, or was not, a distinction. When asked to describe occupational prestige, participants gave answers that included: occupational importance to society, how others see the occupation, how difficult it was to attain the profession, the contribution to society the profession made, and the privileges, respect and power of the profession. When asked to define social standing responses included: family background, contribution to society, remuneration, the individual's friends, individual's neighbourhood, social class, and as earlier, occupation, money and power.

Some participants found the questions redundant, had difficulty describing a difference between social status and occupational prestige and many found it difficult to commit a profession to one particular pile. For instance, a university professor can perform consulting, research, and teaching and does not fit cleanly into one pile.

I discovered that if a respondent was asked for a definition of social standing first and then occupational prestige, he or she was more likely to include occupation in the definition of social standing. When asked for a definition of occupational prestige, many wanted to revise their response to social standing. This manipulation reiterates the importance of question ordering and its impact on responses. More pertinent to my project, is the idea of social standing

and occupational prestige being clearly linked. The implication of this finding is that, while historical occupational prestige surveys asked about "social standing," individuals can recognize the term "occupational prestige," but not enough to substitute the term in for "social standing." Substituting a new term would make historical comparisons with past surveys difficult. The interview schedule can be found in Appendix H. The use of these definitions interchangeably may be a slow, gradual shift.

4.4.2 Occupational Prestige

To include a small qualitative element, I presented participants with an opportunity to give open-ended answers when asked why they made their decisions. One participant made the following comment when asked what occupational prestige meant to her, "it's how people judge you on your occupation. It's the first thing people ask when they meet you and then they make a snap judgment based on that. It can be limiting in social situations and future employment." Another participant expressed that occupational prestige meant "how other people see me and the amount of work that I do."

Several participants made the comment that occupational prestige was based on how difficult it was to obtain a particular job, whether it is through skill or educational requirements. Those occupations that required a high level of education were viewed by participants to be of higher occupational prestige. One participant explained that having a high level of education meant that the "person has commitment to a profession and invested time, energy and money to complete studies. They are given more respect by others as authorities in their fields." One respondent suggested that the "comfort and benefits" that the occupation provides is an indicator of occupational prestige.

Two respondents indicated that occupational prestige is not necessarily a fixed attribute or generally understood term. For instance, one respondent commented that "some jobs have more prestige, perceived or real, in society than others, for example, a doctor versus a garbage collector." Another respondent felt that occupational prestige was a relative term that was based on how important the job is to others, how many people practiced the occupation, and what kind of "image" the occupation already had.

Although many respondents spoke of education and difficulty entering the profession as definitions of occupational prestige, a couple of respondents made comments about the social element they saw. For instance, a participant explained that occupational prestige indicated the "amount of social capital that an occupation carries with it in terms of how it is perceived by the group. The greater the prestige, the greater the capital that commands various rewards including money & privilege" and another mentioned that "individuals often feel good about themselves because of the way society views the work they do. Certain occupations are seen as more prestigious than others; this prestige though is dependent on the culture of the society."

4.4.3 Social Standing

In reference to occupations, the term "social standing" is used to encompass all people in an occupation without asking respondents to consider incumbent traits, such as gender or ethnicity, or discrimination. The term "social standing" re-establishes and re-introduces the idea of a single concept representing a multitude of attributes. This is similar to early socioeconomic and prestige scales that utilized the single concept of occupational role as meaningful, regardless of incumbents. Respondents were asked if the term "social standing" had meaning for them and most indicated that they found the term to be meaningful (Goyder and Frank 2005:7).

Those participants in my survey used money or income as a source or description of social standing. One participant felt that social standing must be organized by some sort of societal hierarchy where individuals are measured by their occupation, money or even both. Other participants simply felt that the average worth of an individual was based on his or her income, what he or she owns, and with whom he or she associates. One participant described this hierarchy by "what is of importance to that society. The level of standing correlates with rewards and decision-making power within the group." Individuals recognize that with money and respect come decision-making power over others.

Several participants described social standing with the term "class" and referred to an individual's "notoriety" or "popularity" among the community and the degree to which people respected the individual and his or her work or impact on the community. Two participants also indicated that to receive social standing in society, the individual must be contributing in some positive manner, For instance, one participant said the following, "admittance into a level of society gives people respect in their community until they use their social standing as their reason for being. In other words, if you are just there but not contributing to society with your talents and skills then it is rarely forgiven."

Pineo and Porter (1967) found that occupational roles gained greater prestige if they complied with societal values. Goyder and Frank (2005:17, 20) tried to identify the influence of understanding the term "social standing" on prestige ranking, and also found that an occupation's "value to society" was a vital consideration. It is not my intention to come to a conclusion from these comments, but only to provide them as a base from which my own research will extend. These observations and comments provide more evidence that the idea of occupational prestige

consensus is not simple. Prestige varies based on subtle nuances and different considerations made by individuals when describing social standing and occupational prestige.

4.5 Data Sets

4.5.1 Occupational Prestige Survey (Title Level Analysis)

The Occupational Prestige Survey was conducted in 2005 by Jolicoeur et associes, for Dr. John C. Goyder of the University of Waterloo. The purpose of this survey is to examine the level of social standing that individuals in Canada attribute to particular occupations. In the case of the current project, my interest lies in the social standing that Canadians ascribe to professions.

A total of 2,053 interviews were conducted. Respondents were randomly selected from telephone numbers and, once a household was contacted, the individual who was 18 years of age or older and with the next closest birthday was selected to be interviewed. This survey worked hard to try and gather an equal number, or a reasonable sample, at least 400 respondents, from each region of Canada (Quebec, Maritimes, Ontario, Prairies, and British Columbia). The resulting respondents interviewed ranged from 402 to 417 and the response rate was 51 percent. Respondents' social background information was also collected. Results from this survey provide information on respondents' perception of occupational prestige, as well as, respondent attributes. A total of 1,120 households were phoned at least 14 times, in an attempt to try and increase the response rate. Each interview averaged 15 minutes in length and was conducted using the Interviewer Window CATI system. Unlike the 1965 survey which asked respondents to rank all 204 occupations, the 2005 survey placed approximately 200 respondents into each of ten sub-samples. Each sample rated 24 occupational titles plus four National Occupational Classification major groups. Identical to the 1965 NORC methodology, the respondents placed

occupations, according to their social standing, onto a ladder with nine rungs (see Appendix A). The question about the prestige, or "social standing," of occupations closely resembles the wording used in a 1965 survey on the same topic.

Respondents were instructed:

> *Imagine a ladder with nine rungs on it. We'll call the top rung number 9, the next number 8, and so on down to the bottom rung, number 1. For 24 occupations, I'll give you the name of the occupation and ask you to say "nine", meaning the top of the ladder, if you think that occupation has the highest possible social standing. Say "one" if you think the occupation has the lowest possible social standing. If it belongs somewhere in between, just say the number corresponding to the social standing of the occupation. An occupation right in the middle is a five. You can enter numbers with a decimal place if you wish. You can go back and check earlier entries at any time, by clicking on the "previous" button.*

From the 2005 macro data, a file of information about each occupation was constructed including census variables that indicate the number, percentage of and income for both men and women for 1961, 1971, 1981, 1991, and 2001. Census data provide the ability to track the number of women in occupations over time to determine growth or loss. NOC codes and skill levels are included as variables. A variable with the Pineo-Porter rating scale from one to nine is another variable. Useful for my analysis, this data set also includes variables from Canadian Classification and Dictionary of Occupations (CCDO) and from the National Occupational Classification (NOC) (Dominion Bureau of Statistics 1971; Human Resources and Social Development Canada 2003) indicating job traits and where an occupation falls in terms of dealing with data, people or things for both 1971 and 2001.

For the current project, only professional occupations will be included in the data set. This data set provides important information to help answer the research questions posed in this project. The survey being conducted on a national scale gives a better idea of how Canadians rank occupations in terms of prestige. Income and educational information is also collected in

this survey which, as outlined in the related literature, is pertinent to occupational prestige research performed by others and for my own research.

4.5.2 KWMAS: Kitchener-Waterloo Metropolitan Area Survey (Individual-Level Analysis)

The KWMAS was conducted in 2000 as a replication of the 1975 Guppy and Siltanen study. In the 2000 survey, slightly more than 800 households were selected as primary sampling units from Canada Post's "Forward Sorting Areas" (FSAs), based on postal codes. From within each FSA, households were randomly selected to be contacted and 40 percent of addresses ended up being "working" and therefore sampled.

The methods of contact began with a letter introducing the study to potential respondents, accompanied by a University of Waterloo-Survey Research Centre mug. A phone call was used if it appeared in the phonebook. Some "cold calls" were made, however they did not appear as effective as door-to-door visits. A disk was sent to some households that had earlier refused to participate or that were unable to be contacted in the hope that the respondents would take the time to complete the survey on their own time using their home personal computers. A total of 275 participants were acquired from personal contact, 62 used the disk option and ten were convinced over repeated contact to participate in the survey. Four respondents are included who did not have matching administrative information. The sample contains 351 contacts and resulted in 239 refusals.

Weights had to be generated to compensate for unequal FSAs, for instance the number within a rural versus an urban area. A new variable (FSAWT) was created to correct this inequality and help to generate representative responses. The mean weighting ended up being 1.0.

This particular data set is useful because it contains gender variables where respondents were asked to give prestige scores to occupations when they were either being given a gender (male or female) attached to an occupation or a gender-neutral occupation. These gender-based occupation prestige scores are available as variables, as well as, the occupation's social standing and prestige in a percentage format. Further, census data counting the number and percentage of male and females in each occupation are variables. Other important variables available in this data set include required level of education and those where each occupation is given a response based on variables ranging from more people-complex versus more data-complex responsibilities.

This data set is important because it offers gendered responses to the prestige of occupations. The respondents were given occupations to rank based on prestige and there were three options that respondents may have received: a male, a female or a gender-neutral occupation. This information is helpful in this project as it provides information as to whether the gender of an individual occupying a profession affects a respondent's prestige ranking. This is the only opportunity in this research to determine how gender impacts respondents' thoughts of prestige for professions. This data set offers demographic information that will give some insight into the types of people, or "who," ranks professions with a particular type of prestige.

4.5.3 Chicago Lawyers Survey Series

The Chicago Lawyers Survey was conducted in 1975 and then again in 1994-5 interviewing practicing lawyers in Chicago, Illinois. This survey of 858 randomly selected, Chicago, Illinois lawyers had an 82 percent response rate and the data were collected through interviews with each lawyer. Seventy percent (599) of the sample is comprised of men and 30

percent (259) is comprised of women. The aim of the study was to capture lawyers' thoughts about their own profession. The 1994-5 survey is an attempted replication; however, it focuses on what has changed in the years since the 1975 survey that affected law and labour market changes. Of the lawyers interviewed, the data set provides gender, job title within law (e.g. partner, associate, etc.) type of law practiced, and most pertinent to my research is the prestige variables that ask lawyers to give a rating from poor to outstanding to different types of law. These prestige variables will form the basis for my analysis on internal stratification.

The data set contained more than 42 types of law being practiced by the responding lawyers but was condensed to 11 types based on abridged areas of law observed (see: http://72.14.205.104/search?q=cache:uHH1OayF9asJ:www.ilrg.com/nlj250/+US+law+firms&hl=en&ct=clnk&cd=1&gl=ca&client=firefox-a and http://law.marquette.edu/cgi-bin/site.pl?current/courseStreams0506 for examples). The new areas of law within the data set are: Business/Commercial including anti-trust, consumer law, securities, general corporate, and uniform commercial code, Civil Litigation including civil rights, Criminal including juvenile, Employment, Environmental, Government law including, immigration, admiralty, municipal, and public utilities, Intellectual Property including trademarks and patents, Taxation, Family including general and divorce, Probate and Real Estate, and Personal Injury. For consistency, these same categories are used to condense the prestige rankings of areas that lawyers provided.

A lawyer had to practice more than 50 percent of his or her time in one of these areas to be included in a particular type of law and subsequently the analysis. All those practicing less than 50 percent of the time or had their time spread across the main types of law where no one area added up to at least 50 percent were dropped from the analysis.

The prestige rankings that lawyers gave areas of law are measured by a five-point scale running from 'poor' to 'outstanding.' Only those rankings that were 'above average' and 'outstanding' are included in the analysis. This decision rule helps to identify specializations that are given higher prestige by most respondents. This is the same proportional cut off used for time spent working in an area of law. When examining the types of law 285 responses are classified as missing and when examining prestige 101 responses are missing.

Although this data set is nearly 15 years old, the variables within it provide very interesting relationships concerning internal stratification that I am seeking greater understanding of within professions.

This survey offers a look into one particular profession that has long existed. The other data do not examine any professions from the inside, as this survey does. The law survey will provide a look into the internal stratification occurring within a profession. Occupational prestige ratings are collected from the public to gather an understanding of where occupations fall in comparison to one another on a scale of prestige or social status. The public's knowledge of the detailed requirements to enter and practice a particular occupation is not totally comprehensive; however asking lawyers to rate the prestige of areas within law provides an examination of factors that may be influencing gender inequality beyond those of which the public is aware. Generally speaking, all lawyers have a similar education level (here the prestige associated with a particularly law school is set aside) where a bachelor's degree in law, successful completion of the bar examination, and a period of articling are required. Differences in prestige ratings across areas of law exist despite this educational similarity. The gender variable will also provide an opportunity to examine the relationship between men and women and particular areas of law. Examining the internal stratification of the legal profession offers a clearer picture of how large

occupational bands can mask discrepancies or inequalities in status that are occurring at a more subtle level and perhaps, are unrecognized by those outside of the profession.

4.6 Data Transformation

4.6.1 Merged Data Sets

Census data from 1961 to 2001 were merged with the file of title scores for Occupational Prestige Surveys from 1965 and 2005. Data were collected on job trait characteristics from the CCDO (Dominion Bureau of Statistics 1971) for 1971 and then again from the NOC for 2001 (HRSDC 2003) and included in one large and main data set used to analyze the prestige of professions over a 40 year period.

A difficulty with examining the prestige of professions using occupational titles as the unit of analysis is the limited number of professions being tracked. There are 26 professions that have been selected and have scores recorded in both the 1965 NORC and 2005 data sets. Despite having a large number of (respondent) cases, by selecting out only those that have been deemed professions for this project, the statistical power is restricted. Analyzing these 26 professions by title can only include a descriptive analysis or tone. Individual rater-level data is employed to provide greater statistical power of prestige analysis. A greater number of cases within the individual-rater data set supports analysis and trends that surface from the initial 26 profession descriptive analysis and gives greater confidence in statistical significance.

To build greater statistical significance within the individual-rater data set, pairs representing two individual raters were selected out at random from the individual-rater data set containing 24,902 lines of data (respondents multiplied by 26 titles, for 1965 and 2005) where a profession had been ranked by someone in both 1965 and 2005. This process looked for scores of a single profession with a 1965 rater and a 2005 rater. This was considered a match and a

case. A check for duplicates ensured that unique matches were being re-used within the data set. The data were reshuffled 30 times and for each shuffle cases where professions had been ranked by respondents in 1965 and 2005 were selected out to create pairs. This procedure is a way of simulating a panel data set. It is impossible to return to 1965 respondents and ask for their 2005 professional rankings, but by re-shuffling and continually sampling from the main data set, proxy matches and a larger sample were created. This creates a stacked file that can be used the same as the file of title scores, but with a better chance of finding some statistical significance among the chosen variables. The final paired data set has 3,003 cases-pairs.

Socio-demographic codes were reconciled across the two samples for consistency. For instance, the education variables in each set were not equivalent. In 1965, very few individuals continued on to post-secondary education and the variable was constructed to reflect that trend. In 2005, many more individuals attended post-secondary and other degree programs beyond high school. The education variable had to be merged so results would reflect the same measures of education.

The data are presented in two forms throughout the analysis depending on what makes the most sense for the reader. The prestige scores associated with professions may be reported using the traditional one to nine scale shown earlier or as an average score where the grouped scores for a profession are transformed into an average on a 0 to 100 scale by multiplying each raw score for a profession by 12.5 and then subtracting 12.5. Both methods report the same prestige for a profession, but depending on the context one may be used over the other to provide better meaning for readers in certain contexts.

This data set also provides the means to track how feminized a profession may or may not be becoming. Census counts of women within professions for 1961, 1971, 1981, 1991, and

2001 track the growth each profession experiences. Further, this count is integral in constructing variables to capture the representation of women in 1961 through 2001, as well as the changing gender composition within each profession.

4.6.2 Variables

A regression method of measuring prestige change is necessary to avoid misinterpreting the actual shift in prestige for professions given that occupational ratings generally shifted up between 1965 and 2005. This regression method subtracts the scores for each profession predicted by 1965 scores from the actual 2005 scores. This method also avoids assuming that the slope between the 1965 and 2005 scores is a perfect 1.0 and captures extreme gains or losses within the context of the overall upward shift. To track the prestige between 1965 and 2005 data, change variables were created using 2001 census data as dependent variables and the 1961 data as independent variables using regression. This method regresses the 2001 values onto the 1961 values and subtracting the predicted prestige values from the 2001 values to come up with the residuals. The equation for this step is as follows: *residual* = 2001 value – ((beta * 1961 value) + constant).

The regression method produces a much more conservative estimate of change and allows the comparison of occupations that share similar educational requirements and are compensated somewhat similarly to be compared with professions given that both of these groups will not have experienced the same dramatic increase as lower ranked occupations. This becomes an issue when those occupations near the lower end of the prestige scores clearly have much more of an opportunity to increase in prestige (and have over the past 40 years), whereas

professions have, for the most part, remained consistently near the top of the prestige scale, limiting upward mobility.

The simple subtraction method is used early on to see the raw change in prestige without taking into account how professions fared in comparison to all other occupations. It serves as a starting point. Change variables are derived between 1961 and 2001 census counts through the regression method and include the following: change in education, change in income, and change in gender representation, people-complex work, and data-complex work.

The thing-complex variable has been excluded from the analysis because of the description given from the CCDO. The "thing" category is referred to as, "inanimate objects as distinguished from human beings; substances or materials; machines, tools, or equipment; products. A thing is tangible and has shape, form, and other physical characteristics" (Dominion Bureau of Statistics 1971:1188). I excluded this variable because, while some professionals do "interact" with things, primarily professionals are doing more of the design and analysis work than the actual setting up of equipment and experiments once they have achieved professional status.

Each of the people and data work traits variables has a scale ranging from zero to eight which describes the type of work that each may involve and occupations are assigned numbers based on their job requirements. Appendix I shows the exact adjective identified by each number. The "data" category includes "information, knowledge, and conceptions related to Data, People and Things, obtained by observation, investigation, interpretation, visualization and mental creation; incapable of being touched. Written data take the form of numbers, words and symbols; other data are ideas, concepts and oral verbalization" (Dominion Bureau of Statistics 1971:1187). The "people" category is described as dealing with "human beings; also includes

animals dealt with on an individual basis" (Dominion Bureau of Statistics 1971:1188). Each profession is assigned either the people or data category based on it's dominating score on these scales.

The CCDO describes the assignment of numbers as the following: "in each instance from a relatively simple up to the more complex at the top in such a manner that each listed in the following table may represent a range of complexity, and because of the limited number of functions in each group, their arrangement should not be considered as precisely hierarchical" (Dominion Bureau of Statistics 1971: 1187). Using these variables can only give a rough estimate of the use of data, people and things involved within a profession given that the numbers do not represent strictly hierarchical responsibilities. Generally, the categories are somewhat hierarchical as the higher numbers represent "no significant relationship" and lower numbers use words that are often associated with higher responsibility and authority, such as mentoring, negotiating, synthesizing and co-coordinating.

The CCDO scores are an imperfect measure of professions' use of data or interaction with people because the scale measures the complexity of this use or interaction. It does not necessarily capture the frequency or day-to-day interaction with people that many professions typically have in their field. These data are used as a proxy for determining whether professions work primarily with data or people-complex tasks and in conjunction with the proportion of women within each profession examined, will provide meaningful information about gender and whether it is linked to more data or people-complex work.

Scores for data and people in 1971 and 2001 are presented in Table 4.1 below. Generally, the data scores did not change very much from 1971 to 2001. Catholic priests, Protestant ministers and professionally trained librarians all moved one point to work at a slightly less

complex level with data. Civil and mining engineers, high school teachers, physicists, psychologists and university professors moved one to three points to work at a slightly more complex level with data. People scores changed more dramatically between 1971 and 2001. Accountants (three points), biologists (one point), chemists (one point), elementary school teachers (four points), mathematicians (six points), physicists (four points), physiotherapists (four points), and registered nurses (one point) all moved several points to work at a more complex level with people. Architects and computer programmers moved two and four points respectively signaling less complex work with people. Most movement in the data and people categories has been toward more complex work and the large movements in the people category give reason to explore if there is an impact of these occupational traits on the prestige of professions given our service-based economy combined with our shift to valuing the traits of the new economy. The new economy's focus on innovation and technology may give data-complex professions greater prestige.

Table 4.1
CCDO and NOC Data/Information and People Codes

	Data		People	
	1971	**2001**	**1971**	**2001**
Accountant	1	1	5	2
Airline pilot	2	2	6	6
Architect	0	0	1	3
Biologist	0	0	3	2
Catholic priest	0	1	0	0
Chemist	0	0	3	2
Chiropractor	1	1	0	0
Civil engineer	1	0	3	3
Computer programmer	2	2	3	6
County court judge	1	1	0	0
Elementary school teacher	0	1	6	2
High school teacher	2	1	2	2
Lawyer	1	1	0	0
Mathematician	0	0	8	2
Mining engineer	1	0	3	3
Pharmacist	1	0	0	2
Physician	0	1	3	0
Physicist	3	0	6	3

Physiotherapist	1	1	6	2
Professionally trained librarian	0	1	0	2
Protestant minister	0	1	0	0
Psychologist	2	1	2	0
Registered nurse	3	3	7	6
Social worker	1	1	0	0
University professor	2	0	2	2
Veterinarian	1	1	0	0

Professions are described as data or people based on which category had the more complex or higher level of interaction score for both 1971 and 2001 using the CCDO and NOC's analysis. Table 4.2 illustrates the decisions made for the analysis of this project in consideration of the CCDO and NOC's description of both the people and data-complex occupations (Dominion Bureau of Statistics 1971; HRSDC 2003). Not all professions fall into the anticipated category according to this measurement. In the instance of nurses and teachers, the tasks/job responsibilities they routinely perform are classified at a more sophisticated/complex level of data rather than people. Nurses received a three on data (**Compiling -** Accumulating information usually recorded physically but which may be stored mentally; gathering, collating and classifying information about data, people and things; frequently reporting and/or carrying out a prescribed action in relation to the information) and six on people (**Speaking – Signaling** Talking with and/or signaling people to convey or exchange information; giving assignments and/or directions to helpers). Teachers received a one on data (**Co-coordinating** Determining time, place and sequence of operations or actions to be taken based on analysis of data; executing determinations and/or reporting events) and a two on people (**Instructing – Consulting** Teaching subject matter to others, giving advice or training others (including animals) through explanation, demonstration and supervised practice; making recommendations on the basis of subject matter expertise) (Human Resources Development Canada 2004). This is certainly

counterintuitive to what we would expect to see given the amount of time nurses and teachers spend with people.

Table 4.2
Description of Professions' Data versus People Orientation

	Data		People	
	1971	**2001**	**1971**	**2001**
Accountant	x	x		
Airline pilot	x	x		
Architect	x	x		
Biologist	x	x		
Catholic priest			x	x
Chemist	x	x		
Chiropractor			x	x
Civil engineer	x	x		
Computer programmer	x	x		
County court judge			x	x
Elementary school teacher	x	x		
High school teacher	x	x		
Lawyer			x	x
Mathematician	x	x		
Mining engineer	x	x		
Pharmacist	x	x		
Physician	x	x		
Physicist	x	x		
Physiotherapist	x	x		
Professionally trained librarian	x	x		
Protestant minister			x	x
Psychologist			x	x
Registered nurse	x	x		
Social worker			x	x
University professor	x	x		
Veterinarian			x	x

Summary

The analysis will flow from an initial descriptive look at the average occupational prestige from a title level to examine general shifts in prestige over a forty year period, followed by a more in-depth look into the characteristics of those individuals who are attributing higher or lower prestige to professions. The final variables that are used in the analysis are based on profession and individual- rater traits. Individual traits include demographic traits such as gender,

age, work status, education and language. These individual traits are available for both 1965 and 2005. The CCDO and NOC inform my research on how much people and data are involved in particular professions and will help to understand how influential these variables are on an individual respondent's prestige rating. Female representation data will be used to identify gender-dominated professions and how influential gender within a profession is for prestige raters. Finally, this research will make a brief examination of the prestige linked with internal stratification that occurs within the legal profession.

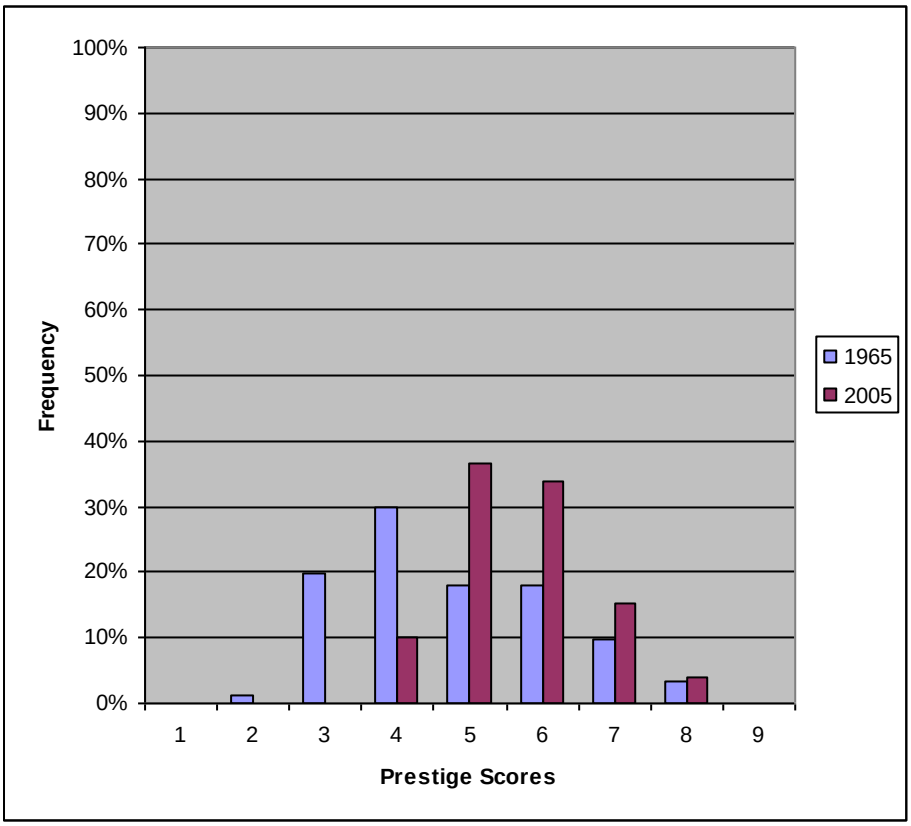
5. Data Analysis

5.1 Occupational Prestige of Professions and Non-professions

Analysis begins with the title-level analysis of the 26 professions, focusing on their coefficients and influence. Measuring prestige shift using regression accounts, as noted, for the overall prestige increase between 1965 and 2005 and allows examination of professions' shift within this context while the overarching increase in occupational prestige is held constant.

Figure 5.1 depicts the distribution and shift of occupational prestige scores for all 177 matching occupations between 1965 and 2005 averaging ratings using the one to nine rating scale. Generally, people in 2005 gave higher scores than their counterparts in 1965. This histogram shows the percentage of occupational titles (out of the 177 rated both in 1965 and 2005) on the vertical axis and the average rating on the one nine scale on the horizontal axis. This figure shows a more dispersed, or evenly spread, ranking of occupations in 1965 and a tightening or pushing up of rankings among 2005 respondents.

Figure 5.1 1965 and 2005 Average Occupational Prestige Scores, (N=177)

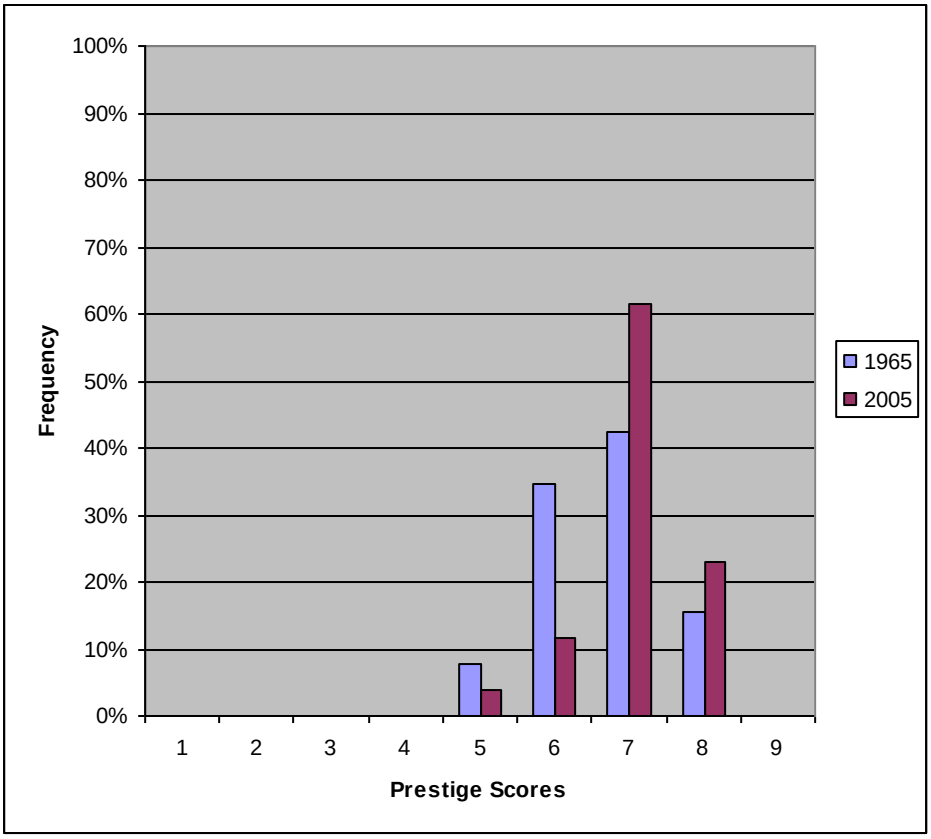


* Based on 177 occupational titles ranked from one to nine in 1965 and 2005, data from the Occupational Prestige Survey, 2005

The research question asks what shifting among professions occurred given that all occupations increased in prestige and how distinct are professions from occupations that carry similar knowledge economy characteristics.

Figure 5.2 depicts the distribution and shift of respondent occupational prestige scores for professions between 1965 and 2005. Again, these rankings occur within the overall occupational prestige squeeze seen during this 40 year period. All occupations, including professions, experienced this general increase in prestige scores and less extreme ranking at either the low or high end of the scale.

Figure 5.2 1965 and 2005 Average Profession Prestige Scores, (N=26)



* Based on 26 professional titles ranked from one to nine in 1965 and 2005, data from the Occupational Prestige Survey, 2005

The overall sample is, as noted, comprised of 26 (15 percent) professionals and 151 (85 percent) other occupations. The mean prestige in 1965 for all occupations was 42.4 with a standard deviation of 14.5. In 2005, all occupations had an increase in mean prestige to 55.6 and a lowered standard deviation of 9.7. In 1965, professions had a mean prestige of 70.5 and a standard deviation of 8.6 and a mean prestige of 75.5 and a standard deviation of 7.8 in 2005. These descriptive statistics are shown in Table 5.1 below. These prestige means show how all occupations, including professions, experienced an increase in prestige. In both 1965 and 2005, professions received greater prestige than all other occupations. It is important to note that

professions began with higher prestige than other occupations and this ceiling effect impacted the amount of prestige gain that professions experience. A profession with a high prestige rating has a limited amount of prestige to gain and will therefore appear as though it has gained less than the average occupation which has more room to grow. While it is true that professions have less room to increase their prestige, this analysis aims to look beyond the increase or decrease in prestige and also examine the impact of characteristics influencing this change.

Table 5.1

Sample Descriptives of Professions and All Occupations

	1965		2005		Difference	
	Professions	All Other Occupations	Professions	All Other Occupations	Professions	All Other Occupations
Mean prestige	70.5	42.4	75.5	55.6	5.0	13.2
Standard deviation	8.6	14.5	7.8	9.7	-0.8	-4.9
Difference of Means (t-test)*	28.1		19.9			

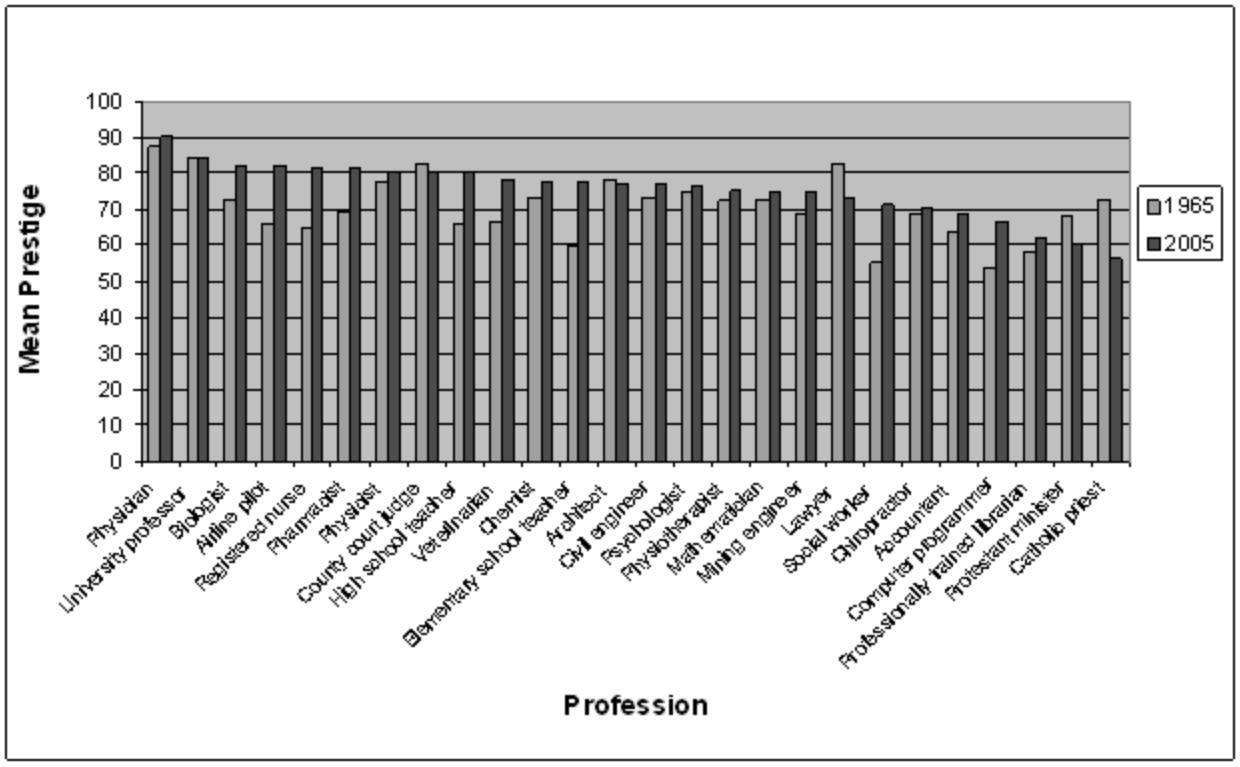
*t-test revealed Levene's test for equality of variances in 1965 is insignificant and that 1965 variances are different from 2005. The equality of means tests is significant for both years.

The average professional prestige has increased by approximately five points on a scale of 0 to 100 between 1965 and 2005, however, the standard deviation shows a decrease of approximately 0.8 as we suspected from Figure 5.2. Although professions received higher prestige over that 40 year period, this is smaller than the overall increase of prestige of all occupations, it is a decline in a relative sense.

The mean prestige for all professions is the best estimate of the public's opinion of professions. Through mean prestige scores, we can gain an understanding of the professions that the public deems more prestigious and which they deem less prestigious based on perception without being prompted to consider variables such as income or education.

Using the 0 to 100 scale, the Figure 5.3 bar chart shows the distribution of prestige change in respondent scores for each of the 26 professions between 1965 and 2005. The professions are ordered by highest to lowest 2005 prestige score. The following professions experienced a decrease in attributed prestige over the same time period: university professor, county court judge, lawyer, architect, Catholic priest, and Protestant minister. My later analysis on the internal stratification within the legal profession is driven by this decrease in prestige by lawyers over this time period.

Figure 5.3 Distribution of Respondent Mean Prestige Scores, 1965 & 2005, (N=26)



Occupational Prestige Survey, 2005

As we read across Figure 5.3, there are some striking differences in gains and losses. For instance, airline pilots, registered nurses and social workers made significant gains in prestige.

Airline pilots may have gained prestige due to increasing reports and acts of terrorism which the public may translate into a greater respect for those who work in occupations associated with travel and safety through these events. Social workers experienced a prestige gain which may be attributed to the fact that more people may be seeking out and being referred to professionals to help them with personal difficulties than in the past. On the other hand, lawyers, Protestant ministers and Catholic priests show a significant loss in prestige. Lawyers are notoriously disliked by the public and the public's increased accessibility to once esoteric knowledge, for example, the ability to write one's own legal will or represent oneself in small claims court, may contribute to lowered prestige. In the case of priests, increasing secularization and news reports on socially inappropriate behaviour over the last few years have exposed the profession to criticism on what was once assumed to be a very sacred and pure occupation. The decline for Catholic priests is not a gender issue due to strict occupational requirements surrounding gender. These are professions to keep in mind and speculate about as to why the public is giving less prestige to these professions 40 years later. Other gains and losses occur and are summarized in Table 5.2.

Table 5.2 provides the prestige shift of all professions in order of largest gain to loss as well as the directional difference in prestige scores. This table makes it clear that only six of the professions lost prestige in the absolute sense in the 40 year period: university professors, county court judges, lawyers, architects, Catholic priests, and Protestant ministers. The remaining 20 occupations experienced a gain that ranged from 1.9 percent to 17.9 percent increase.

Table 5.2

Profession Prestige Scale Change, (0-100)

	1965	2005	Difference
Elementary school teacher	59.6	77.5	17.9
Registered nurse	64.7	81.6	16.9
Social worker	55.1	71.4	16.3
Airline pilot	66.1	82.2	16.1
High school teacher	66.1	80.3	14.2
Computer programmer	53.8	66.5	12.7
Pharmacist	69.3	81.5	12.2
Veterinarian	66.7	78.1	11.4
Biologist	72.6	82.3	9.7
Mining engineer	68.8	74.6	5.8
Accountant	63.4	68.9	5.5
Professionally trained librarian	58.1	62.3	4.2
Chemist	73.5	77.7	4.2
Civil engineer	73.1	77.3	4.2
Physiotherapist	72.1	75.4	3.3
Physician	87.2	90.9	3.3
Physicist	77.6	80.6	3.0
Mathematician	72.7	74.8	2.1
Chiropractor	68.4	70.3	1.9
Psychologist	74.9	76.7	1.8
University professor	84.6	84.3	-0.3
Architect	78.1	77.3	-0.8
County court judge	82.5	80.6	-2.0
Protestant minister	67.8	60.1	-7.7
Lawyer	82.3	73.1	-9.2
Catholic priest	72.8	56.1	-16.7

From this basic prestige analysis, we can consider reasons behind increases and losses based on the literature. For instance, registered nurses are now required to go through a university program and are working in more diverse settings than doctors' offices and hospitals (Hiscott 1998). The public may be more accustomed to seeing nurses in non-hospital settings now and not always under the supervision of doctors. Professionally trained librarians require a Masters degree. Although only six professions actually lost prestige, many gained very little prestige over the 40 year period. For instance, accountants only increased by 5.5 prestige points

and physicians only gained 3.3 prestige points on the 0 to 100 scale. These professions already began with quite a high level of prestige and, therefore did not have as much of an opportunity to increase in prestige as other professions such as, an elementary school teacher.

5.2 Title-Level Analysis: Education, Income and Gender Representation

Education, income and gender representation in professions are expected to influence the prestige change over the 40 year period. Given this prediction, the following sections will take a brief look into the means, standard deviations, correlations and differences over this same time period using title-level analysis (N=24,902).

5.2.1 Education

A rise in educational credentials among the public and for gaining entry into occupations is one fixture of the new economy. Suspicions of education influencing occupational prestige lead to the research question of whether a profession with higher education than other professions would capture a higher occupational prestige score. The education variable represents the proportion of those within a profession with university education minus the proportion with only elementary schooling. This variable matches the 1961 and 2001 education data from the census and was the measure of education used in the 1981 Blishen scores. One interesting case example in changing education requirements is registered nursing. This occupation used not to require a college or university degree. The increased educational requirements of registered nurses may lead some 2005 respondents to give greater prestige to nurses than respondents in 1965.

Table 5.3

Education, Income and Gender Descriptives (N=24,902)

	Education			Income			Gender		
	1961	**2001**	**Difference**	**1961**	**2001**	**Difference**	**1961**	**2001**	**Difference**
Mean	0.4	0.8	0.4	3.7	4.8	1.1	0.2	0.4	0.2
Standard deviation	0.4	0.2	-0.2	0.2	0.1	-0.1	0.3	0.3	0.0
Correlations between 61 & 01		00.6**			00.8**			00.9**	
Correlations									
1965 Prestige	0.6**	0.5**		0.5*	0.7**		-0.4*	-0.4*	
2005 Prestige	0.2	0.2		0.5**	0.6**		0.1	0.1	

*p<.05, **p<.01

Income presented in logged dollars to meet the assumption of normality

Note: Census parameters-These data do not need to be tested for statistical significance via t-test because they are based on figure 5 from 1961 and 2001 census populations and are therefore population parameters not sample estimates.

From Table 5.3 we see mean and standard deviation results from the three main independent variables in the title-level analysis: education, income and gender proportion. For a full correlation matrix see Appendix J. In the 1961 census, the mean education score was 0.4 with a standard deviation of 0.4. Forty years later, the mean score for education is 0.8 with a standard deviation of 0.2. This change in mean education demonstrates that a greater number of those individuals working in professions are highly educated. An increase of 0.4 in mean education demonstrates this shift. Further, we see that the standard deviation has decreased (-0.2) over the same period resulting in a smaller normal distribution and telling us that individuals working in professions have become more similar in terms of the likelihood that they accrue education in 2001. The 1961 education variable has a significant positive correlation with 2001 education of r=0.6 (p<.01). Looking at the positive correlation between 1961 education and 1965 prestige (r=0.6) we see that increased education is related to higher prestige levels. The correlation between 1961 and 2001 education and 2005 prestige are not significant.

5.2.2 Income

Given that many of the occupations being studied would be expected to reside at the upper end of the income scale, exploratory work used income as both logged and unlogged to see any difference in skew. Logged income is less skewed and appears to have a more normal distribution. Including some occupations that are not necessarily considered professions in 2005 as they were by Pineo and Porter in 1965 (example, computer programmers) by the public majority may influence this skewed behaviour by the income variable and it is more conservative to log income.

Table 5.3 shows that the mean income in 1961 is 3.7 logged dollars with a standard deviation of 0.2. In 2001, professions show an increase of mean income at 4.8 logged dollars and a standard deviation of 0.1. This increase largely reflects currency inflation but the distribution is narrowed slightly (-0.1) too. The 1961 logged income variable has a significant positive correlation with 2001 income of $r=0.8$ ($p<.01$). Looking at the positive correlation between 1961 income and 1965 prestige ($r=0.5$, $p<.05$) we see that increased income is related to higher prestige levels. There is a positive correlation between 2001 logged income and 2005 prestige of $r=.6$ ($p<.01$). The means for unlogged income dollars for 1961 and 2001 are $41,402 and $121,167 respectively and the standard deviations are $6,472 and $18,402.

5.2.3 Gender

According to Foschi, Warriner, and Hart (1985:108) “performance expectations are beliefs about how well a person will do a task in the future.” These expectations are a result of the ability of an individual to meet expectations of two comparison people, themselves and the other. Expectations are often formed by generalizations that the public makes based on “status characteristics the two performers possess” (Foschi, et al. 1985:108). The standards that

performers are held to are based on how well a person has to perform to receive acknowledgment that he or she has reached the expectation (Foschi, et al. 1985:109). This provides a framework or how the public will acknowledge whether a man or woman would perform better in a particular profession.

Table 5.3 shows that the mean gender (proportion of females) change percentage in 1961 is 0.2 points with a standard deviation of 0.3. In 2001, professions show an increase of mean gender representation at 0.4 and a standard deviation of 0.3. This increase, discussed earlier, shows us that professions increased their representation of women by 0.2 points on average and also that the distribution has not narrowed significantly. The average representation of women in professions thus nearly doubled in a forty year period. This change is expected based on the raw numbers and percentages of representation within census data. As expected, the 1961 female representation variable has a significant positive correlation with 2001 female representation of $r=0.9$ ($p<.01$). The correlation between 1961 female representation and 1965 prestige is $r= -0.4$ ($p<.05$) indicating a negative relationship between numeric female representation and prestige in 1965 where a greater proportion of females in a profession results in lowered prestige. The correlation between 1961 and 2001 female representation and 2005 prestige are not significant. This suggests that female proportion is not influential in the prediction of 2005 prestige and raises some doubt about my hypothesis concerning gender change and prestige change.

5.3 Tracking Female Workforce Participation between 1961 and 2001

There has been an increase in the presence of women in professions over the past 40 years as well as an unexpected decrease in professions' prestige professions given the valued traits of the new economy. Appendix E shows the percentage of women in each profession from 1961, 1971, 1981, 1991, and 2001. Table 5.4 shows women as a percentage of professions in

both 1961 and 2001 as well as the change in female representation over that time. In 1961, women had higher representation as registered nurses (96.2 percent), professionally trained librarians (81.7 percent), physiotherapists (76.4 percent), and teachers, both elementary and high school (70.7 percent). The professions (excluding Catholic priests) with the fewest women as a percentage of all individuals were: mining engineers (0 percent), civil engineers (0.2 percent), airline pilots (0.3 percent), Protestant ministers (1.6 percent) and veterinarians (1.7 percent).

Women have made large representation changes among the professions between 1961 and 2001. While women still have the highest representation as nurses, librarians, physiotherapists and teachers, they did make major advances in typically male-dominated professions. For instance, the greatest increases in representation of females occurred in accounting where representation jumped from 5.1 percent to 52.8 percent, veterinarians from 1.7 percent to 47.7 percent, pharmacists from 13.3 to 57.6 percent, psychologists from 24.5 percent to 67.3 percent and lawyers from 2.6 percent to 34.7 percent.

Table 5.4

Change in Female Representation, 1961 and 2001

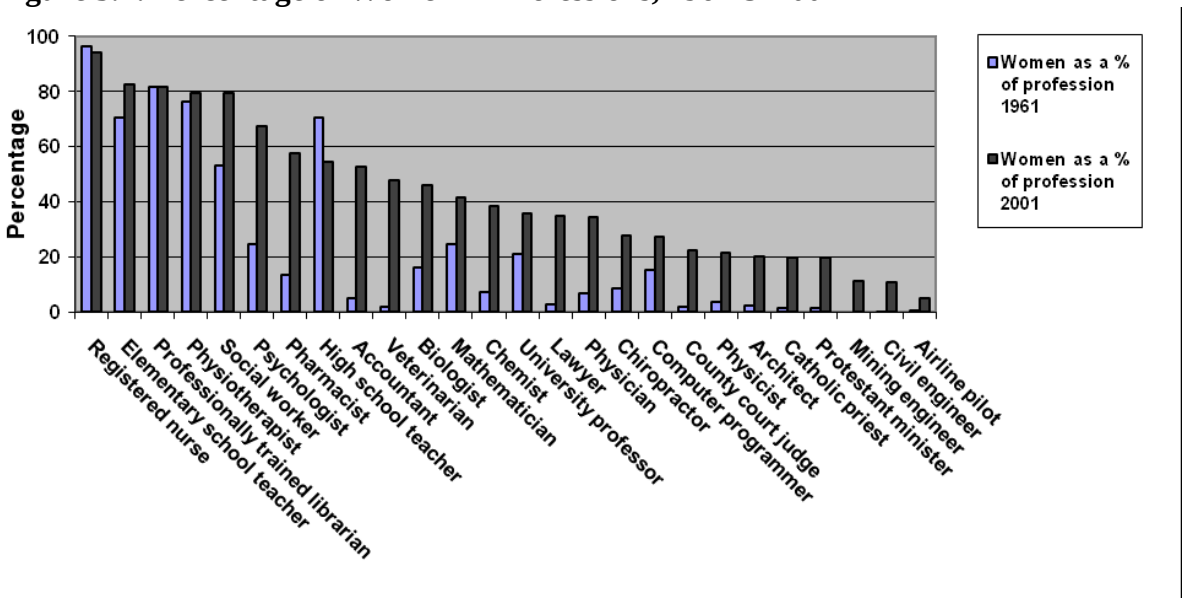
	Women as a % of profession 1961	Women as a % of profession 2001	Difference 1961-2001
Accountant	5.1%	52.8%	47.7%
Veterinarian	1.7%	47.7%	46.0%
Pharmacist	13.3%	57.6%	44.3%
Psychologist	24.5%	67.3%	42.8%
Lawyer	2.6%	34.7%	32.1%
Chemist	7.2%	38.5%	31.3%
Biologist	16.1%	45.9%	29.8%
Physician	6.8%	34.3%	27.5%
Social worker	53.3%	79.3%	26.0%
County court judge	2.0%	22.5%	20.5%
Chiropractor	8.4%	27.7%	19.3%
Catholic priest	0%	0%	0%
Protestant minister	1.6%	19.8%	18.2%
Architect	2.2%	20.0%	17.8%

Physicist	3.7%	21.5%	17.8%
Mathematician	24.5%	41.5%	17.0%
University professor	21.2%	35.9%	14.7%
Computer programmer	15.1%	27.3%	12.2%
Elementary school teacher	70.7%	82.7%	12.0%
Mining engineer	0.0%	11.0%	11.0%
Civil engineer	0.2%	10.7%	10.5%
Airline pilot	0.3%	5.0%	4.7%
Physiotherapist	76.4%	79.5%	3.1%
Professionally trained librarian	81.7%	81.5%	-0.2%
Registered nurse	96.2%	94.2%	-2.0%
High school teacher	70.7%	54.5%	-16.2%

(1961 Dominion Bureau of Statistics and 2001 Census of Canada, Statistics Canada)

With such high increases in the representation of women among professions over a 40 year period, it is appropriate to examine how influential gender was to occupational prestige shifts. Figure 5.4 shows the professions with the largest proportion of women in 2001 reading from left to right.

Figure 5.4: Percentage of Women in Professions, 1961 & 2001



The representation of men and women in law continues to be important background to my focus on the legal profession. From Table 5.4, between 1961 and 2001, women lawyers increased their representation within the profession by a noteworthy 32.1 percent or approximately two percent per decade. Between 1961 and 2001, law is the fifth highest profession in terms of increased women's representation. During that same time period, Table 5.5 shows that men went from representing 97 percent of the legal profession in Canada down to 65 percent of the profession. Although men were continuing to enter law in higher absolute numbers, they experienced an overall decline of 32 percent over four decades, approximately eight percent per decade, in their overall representation. Women lawyers went from representing three percent of lawyers in 1961 to 35 percent of lawyers in 2001. Women increased their representation by approximately two percent per decade. A distinct shift in the absolute number of men and women entering law is seen in 1991 where women overtake men in their increased numbers where women increase by 10,460 from 1981 and men increase by 8,770 from 1981.

Table 5.5
Gender Representation of Legal Profession, 1961-2001

Year		Men	Women
1961	**Absolute Number**	11,777	311
	% of Profession	97%	3%
1971	**Absolute Number**	15,735	850
	% of Profession	95%	5%
	Absolute Increase 1961-1971	3,958	539
1981	**Absolute Number**	29,305	5,295
	% of Profession	85%	15%
	Absolute Increase 1971-1981	13,570	4,445
1991	**Absolute Number**	38,075	15,755
	% of Profession	71%	29%
	Absolute Increase 1981-1991	8,770	10,460
2001	**Absolute Number**	42,750	22,705
	% of Profession	65%	35%
	Absolute Increase 1991-2001	4,675	6,950

From the above analysis, we see a dramatic increase in female workforce participation in the profession since 1961. A next step to understanding more about the impact of gender on prestige is to examine the influence of stereotypical gender traits, for instance working more with people or data/technology, on prestige.

5.4 Data and People

Aside from influences of education, income and gender, another possibility is that 2005 prestige may be impacted by the nature of the job or profession and whether it has changed over the years. This leads to an analysis of the job traits, working primarily with data or people. Information is available for each of these traits for professions in 1971 and 2001 from the CCDO and NOC (see Chapter 4). It is important to note that the direction of the data and people scores variable runs from zero, working at a highly complex level with either data or people to eight, working at a less complex level with either data or people. The scales have been recoded in the data set to make the output more intuitive where higher scores in results shown below mean highly complex level of work.

Table 5.6

Data and People-Complex Tasks and Gender Proportion Descriptives (excluding Catholic priests, N=24,902)

	Data			People			Gender Proportion		
	1971	**2001**	**Difference**	**1971**	**2001**	**Difference**	**1971**	**2001**	**Difference**
Mean	7.4	7.7	0.3	5.2	6	0.8	0.2	0.4	0.2
Standard deviation	0.8	0.6	-0.2	1.9	1.6	-0.3	0.3	0.3	0.0
Correlations between 71 & 01		0.6**			0.7**			0.9**	
Correlation									
1965 Prestige	-0.3	-0.4*		-0.3	-0.3		-0.4*	-0.4*	
2005 Prestige	0.2	-0.1		0.1	0.2		0.1	0.1	

*p<.05,
**p<.01

Note: Catholic priests have been removed from the analysis due to no gender differences. This results in only 25 professions being reported out in this matrix.

Table 5.6 shows that the mean use of data among professions in 1971 is 7.4 points with a standard deviation of 0.8. In 2001, professions show an increase of mean data use up to 7.7 and a standard deviation of 0.6. The resulting difference is an upward trend in mean data scores of professions by 0.3 points between those 30 years, indicating an increase in professions focusing on data-complex work. The correlation of 1971 data use and 2001 data use among professions is $r = 0.6$. The 1971 and 2001 data variables are not significantly correlated in a meaningful way with 1965 and 2005 prestige (aside from a positive correlation between 1965 prestige scores and 2001 data), suggesting that the influence of performing more data-complex work is not important to prestige.

People-complex professions had a mean of 5.2 in 1971 with a standard deviation of 1.9 units. In 2001, the mean had risen to 6.0 and the standard deviation had fallen to 1.6. Professions used to work with people at a less complex level in 1971 than in 2001 and we see an increase (by 0.8) in complex work with people over that 30 year period. The 1971 people variable has a positive correlation with 2001 people-complex professions with a correlation of 0.7 ($p<.01$). People-complex work variables are insignificantly correlated with 1965 and 2005 prestige. These simple descriptives indicate a non-significant correlation or relationship between 1971 and 2001 data and people-complex profession concentration and 1965 and 2005 prestige.

Summary

So far the title-level data have informed the research that the prestige distribution of all occupations and professions has shifted over a 40 year period, narrowing in distribution. In 2005, there is a squeeze on the scores given to professions, with fewer extreme scores and more clustering within those extremes. Although professions gained prestige scores they experienced a relative loss in comparison to the prestige increase of all occupations.

Analysis shows a greater number of individuals working in professions are highly educated and a greater number of highly educated individuals in 1961 are positively correlated to an increase in 1965 prestige. This significant relationship is not present with 2005 prestige. Over the 40 year period professions increased their income and their overall income distribution narrowed slightly, where professions are earning more but the range of their earnings has slimmed. There was a strong positive relationship between 1961 and 2001 income and 1965 and 2005 prestige, where an increase in income saw a related increase in prestige.

The average representation of women in professions nearly doubled in a 40 year period. The absolute numbers of women demonstrate that even professions with large numbers of women still incurred an increase of women between 1961 and 2001. The representation of women within professions indicates a proportional increase in women's representation within professions given their initial starting points. Further, there is an absolute increase in women in all professions except among high school teachers and mathematicians. Women continue to have the highest representation as registered nurses, professionally trained librarians, physiotherapists, and elementary and high school teachers. Women have made the most advancement in terms of representation as accountants, veterinarians, pharmacists, psychologists, and lawyers. Specifically, men lawyers' representation has been declining an average of eight percent per decade between 1961 and 2001, while women lawyers' representation has been increasing an average of two percent per decade during the same time period. Unlike education and income, 1961 gender representation of women has a negative correlation with 1965 prestige scores. There is no significant correlation between women's representation and 2005 prestige.

The use of data and working with people in more sophisticated ways has increased between 1971 and 2001 however, there is no significant and meaningful correlation between data

and people work with prestige. Data and people-complex work and proportion of females in 1971 has a positive correlation with 1965 prestige however none of these has a significant correlation with 2005 prestige scores. As the level of data or people-complex tasks increases in 1971 so too do the 1965 prestige scores. As the proportion of females increase in 1971 we see a decrease in the 1965 prestige scores indicating that gender does play a part in how prestige was attributed at that time. A lack of significant relationships with 2005 prestige suggests that these variables are no longer influential on prestige scores 40 years later.

Based on these initial title-level descriptive findings, the individual level analysis will be conducted with the aim of understanding how rater characteristics influence prestige scores in 1965 and 2005.

Chapter 6: Individual-Rater Prestige Ratings

As seen in previous literature (see Blishen et al. 1987; Goyder et al. 2003; Glick, Wilk and Perreault 1995; Bose and Rossi 1983; Reskin and Hartmann 1991; Hauser and Warren 1997), individuals allocate occupational prestige based on how appropriate the occupation is for the gender of its incumbents. Particular occupations have been considered to be either female or male-appropriate and prestige is allocated based on the match between the appropriate gender for the occupation and the gender of the individual found within that occupation. Using census data from 1961 and 2001, the proportion of women within professions will be used to test whether the increased number of women negatively influences occupational prestige ratings and whether women will give higher prestige and men will give lower prestige to female-dominated professions.

In analyzing the professions and the prestige attributed to their titles (see chapter 5), the absolute number of women in professions in 1961 was very low overall and even smaller when distributed across professions. Due to this minimal representation, women's representation across professions will have, theoretically and statistically, a very low variance. High absolute numbers of men in professions may also impact the affect of prestige at that time. For instance, men were highly represented as accountants, computer programmers and veterinarians but these held low prestige (ranging from 53.8 to 66.7). Using a gender proportion change variable in the regression helps to monitor the impact of these representation differences on prestige.

The unit of analysis in predicting overall prestige is the rating of one occupational title by one respondent. This allows the distinction between male and female raters to be examined much more efficiently than is possible at the title-analysis level. The total number of cases in this analysis is 3,003. To determine the relationship between rater gender and incumbent gender

two variables capturing the proportion of males and females within each profession for 1971 and 2001 were constructed. Five professions from the original 26 were chosen for having the most males in 1961 and 2001 and five for top females in 1961 and 2001 to represent the gender dominating factor. The decision rule behind this selection is that the proportion of women in chosen professions had to be above 70 percent. This selection was based strictly on relative numbers because very few professions were female-dominated in 1961. Only five professions fit the 70 percent criterion for 1961 and 2001 women and therefore five of the top male-dominated professions were consequently selected. See the table in Appendix J for female-dominated professions. Table 6.1 shows the final list of professions used to represent numerically standardized male and female-dominated professions: 1961 male-dominated are architect, civil engineer, lawyer, physician, and veterinarian, 1961 female-dominated are elementary school teacher, high school teacher, physiotherapist, professionally trained librarian, and registered nurse, 2001 male-dominated are architect, civil engineer, computer programmer, mining engineer, and physicist, and 2001 female-dominated are elementary school teacher, physiotherapist, professionally trained librarian, registered nurse, and social worker.

Table 6.1

Gender-Dominated Professions, 1961 and 2001

	1961
Male-dominated	**Female-dominated**
Architect	Elementary school teacher
Civil engineer	High school teacher
Lawyer	Physiotherapist
Physician	Professionally trained librarian
Veterinarian	Registered nurse
	2001
Architect	Elementary school teacher
Civil engineer	Physiotherapist
Computer programmer	Professionally trained librarian

Mining engineer	Registered nurse
Physicist	Social worker

This analysis does not guarantee statistical significance on the relationship between rater gender and incumbent gender on occupational prestige because the data set still only contains ten profession observations for each year out of the 26 professions. The mean prestige allocated to these professions based on rater and incumbent gender will only be used for descriptive purposes.

6.1 Influence of Gender-dominated Professions on Prestige Means

To test for the main effects and interaction on prestige scores for the hypothesis that women will give higher prestige to female-dominated professions over time, year is controlled for to determine if there is a difference in prestige ratings between 1965 and 2005. The data file used for this analysis is the unpaired, individual rater file with 24,902 cases. Using the top five numerically greater professions for each gender, gender-dominant composition variables were calculated for 1965 and 2005. These variables were calculated by recoding the subset of professions that are numerically dominated by gender as either male dominated or female dominated to generate a dichotomous gender composition variable for 1965 (N=7,623) and 2005 (N=1,820). These new variables served as proxies for indicating the influence that a profession had on prestige by being either male or female dominated. In both 1965 and 2005, men and women did not give significantly different mean prestige scores based on male or female-dominated professions. An observed difference was seen but this did not survive significance. Table 6.2 shows that in 1965 male-dominated professions received higher prestige from both men and women with means of 76.4 and 79.0 respectively. As expected, a t-test indicates that

this analysis is not significant at p<.05 and that men and women did not give significantly different mean prestige scores based on male or female-dominated professions.

Table 6.2

Mean Differences in 1965 Prestige Allocated to Gender-Dominated Professions by Gender

Gender of Rater	Gender Dominated	Mean
Female	Female	68.3
	Male	79.0
Male	Female	64.1
	Male	76.4

N=7623, p<.05*

Table 6.3 shows the mean prestige differences between men and women based on whether occupations were male or female-dominated in 2005. These mean differences did not survive a t-test of p<.05 but do show an interesting descriptive difference where women were more likely to give higher prestige scores overall and gave female-dominated professions greater prestige than men. Further, the gap between the prestige ratings attributed to male and female-dominated professions shrank between 1965 and 2005. In 1965, women gave male-dominated professions 10.7 prestige units more, whereas in 2005 women only gave male-dominated professions 1.8 prestige units more. This descriptive observation suggests an evening out of the prestige allocated to professions based on the dominant gender of a profession. In 2005, men do not downgrade female-dominated occupations any longer. An ANOVA test shows the 2005 gender composition variable to be insignificant which indicates that there are no differences in the means of the sample.

Table 6.3

Mean Differences in 2005 Prestige Allocated to Gender-Dominated Professions by Gender

Gender of Rater	Gender Dominated	Mean
Female	Female	75.8
	Male	77.6
Male	Female	71.3
	Male	71.2

N=1,820, p<.05*

6.2 Predicting 2005 Professional Prestige

Next the data are used to predict the change in prestige of professions in 2005. As noted in Chapter Four, this data set is constructed by randomly matching two individual profession ratings. It consists of 3,003 matched pairs or cases and includes all 26 professions. These paired cases create a data set that simulates the prestige ratings of one individual (or the equivalent to one individual using proxies to match professions) in 1965 and 2005. This matched data set complements the data set where professions have ratings at each point in time (1965 and 2005) by having what we treat as the same individual rating the same occupation at two different points in time allowing for significance testing (see chapter 4 for more detail).

Using the paired data, the first regression looks at the characteristics that professions held. Table 6.4 shows the predicted prestige rating by individuals for professions in 2005 using change variable scores to describe professions and controlling for the 1965 prestige rating of a randomly selected individual. Change scores are used to determine if the change in a variable between 1965 and 2005 impacts the 2005 prestige rating. In block one, we see that changes in income and people-complex professions have a significant positive effect on 2005 prestige ratings, while change in data-complex professions results in a significant negative correlation as

prestige ratings increase. As found in Chapter Five, professions gained more female representation between 1965 and 2005, and these professions received significantly higher prestige ratings (β=0.2), failing to support the original hypothesis that an increase in the presence of women would result in a prestige decline. These variables account for R^2=.08 of the variance in predicting 2005 prestige. This model indicates that the type of work, either working with data or people and the characteristics of individuals within professions influence the 2005 prestige ratings of professions.

Table 6.4

Predicted 2005 Prestige by Professional and Individual Rater Characteristics in 1965 and 2005

		Unstandardized B	Unstandardized Standard Error	Standardized Beta	t	
Block One	*Prestige Coefficients*					
	Prestige Score, 2005 (constant)	70.2	1.3		53.4	*
	Prestige Score, 1965	0.0	0.0	0.1	2.8	*
	Change in Income	0.4	0.0	0.0	9.8	*
	Change in Data	-8.1	0.7	-0.2	-10.8	*
	Change in People	5.0	0.4	0.3	13.0	*
	Change in Female Proportion	31.3	3.6	0.2	8.8	*
					R^2=.08	
Block Two	Both Respondents University	-4.7	2.9	0.0	-1.6	
	Both Respondents No University	1.0	0.8	0.0	1.3	
	Both Respondents Female	3.2	0.9	0.1	3.6	*
	Both Respondents Male	-3.1	1.0	-0.1	-3.1	*
	Both Respondents Francophone	-0.4	1.8	0.0	-0.2	
	Both Respondents Anglophone	-0.6	0.8	0.0	-0.7	
	Both Respondents Canadian Born	1.3	2.2	0.0	0.6	
	Both Respondents Foreign Born	-1.1	0.9	0.0	-1.2	
					R^2=.09	

N=3,003, p<.05*

The above model has provided the significance of variables that we had seen in the professional title-level analysis and the next model will add to our understanding of prestige ratings by providing information on how influential the characteristics of raters are on 2005 prestige ratings.

Individual rater characteristics have been added to the model in block two to predict 2005 prestige and together have been able to account for R^2=.09 of the variance in ratings. Table 6.4 shows that the previous significant variables have held and in addition to those, having both 1965 and 2005 respondents being female positively influences prestige ratings (β= 0.1). When both 1965 and 2005 respondents are male this negatively influences prestige ratings (β= -0.1). This model reveals that women are adding prestige to professions over the 40 year period. Change in education is insignificant in this model. This finding is expected due to the fact that the education level of professions is generally known to be higher and respondents, with or without a university education, would not have as much difficulty attributing a prestige rating to these higher-prestige occupations. Whether a respondent was Francophone or Anglophone, Canadian or foreign born were all insignificant variables.

When interaction variables between both respondents being female or male and the proportion of women in professions were included in the model they proved to be insignificant. This finding disconfirms the hypothesis that as women increasingly entered the professions, women raters would give professions with greater female representation higher prestige ratings over the 40 year period. Women raters were no more likely to give female-dominated professions or those with a higher proportion of women higher prestige scores than men.

In Table 6.5, the final regression model tests the previously significant profession and rater characteristics: change in income, change in data-complex tasks, change in people-complex

tasks, and change in female proportion of a profession with rater gender for significance in predicting the 2005 prestige of professions. Significant variables demonstrate the opportunity to predict prestige based on profession characteristics. This suggests that any changes to those characteristics from within a profession would result in an occupational prestige change.

Table 6.5

Final Predicted 2005 Prestige by Professional and Individual Rater Characteristics in 1965 and 2005

	Unstandardized		Standardized		
	B	**Standard Error**	**Beta**	**t**	
Prestige Coefficients					
Prestige Score, 2005 (constant)	70.1	1.4		51.5	*
Prestige Score, 1965	0.0*	0.0*	0	2.6	*
Change in Income	0.4*	0.0*	0.2*	9.9	*
Change in Data	-8.1	0.7*	-0.2*	-10.9	*
Change in People	5	0.4*	0.3*	13	*
Change in Female Proportion	31.3	3.5	0.2*	8.9	*
Both Respondents Female	3.1	0.9	0.1	3.6	*
Both Respondents Male	-3.1	1	-0.1	-3.1	*
					R^2=.09

N=3,003, p<.05*

The final model in predicting 2005 professional prestige has a R^2=.09. Variables that had a significant positive influence on 2005 ratings were: 1965 prestige scores, change in income, change in people, and change in female proportion and being a female rater. Standardized coefficients show that change. Change in income and change in female proportion had the same standardized influence on prestige but because the interaction between these two variables was insignificant, they are do not have a compounding influence on prestige. The change in professions that work with more people-complex tasks had a slightly greater standardized impact on prestige than did data-complex professions and, contrary to my hypothesis; people-complex

also had a positive rather than negative impact. Changes in professions that interact with data on a more complex level and being a male rater resulted in negative prestige influences. Female and male respondents had equal but opposite influences on prestige where female raters positively influenced and male raters negatively influenced the prestige given to professions. Female raters had a positive impact on the 2005 prestige while male raters had a negative impact on the prediction of 2005 prestige. This model confirms my hypotheses that higher income professions and women raters will result in higher occupational prestige prediction. Changes in education of professions and rater education are insignificant to the prediction.

Examining the correlation matrix in Appendix L shows a significant positive correlation between the change in professions working with data-complex tasks and the change in the proportion of women in professions over the 40-year period. This positive correlation between data-complex tasks and the proportion of women within professions could easily be interpreted as a dependent relationship.

When examining Table 6.5 data-complex professions have lost prestige between 1965 and 2005 and the proportion of women in professions has gained prestige. This loss in data-complex prestige would undermine women's gain in prestige if the data-complex change variable was not held constant. Without including the data-complex change variable in the model, overall data-complex professions lose prestige and subsequently women lose prestige because they are moving into these professions. At the same time, if the change in data-complex professions is not acknowledged over this time period then it could be assumed that only professions gaining women are gaining prestige. The effects of data-complex professions losing prestige and women-dominated professions gaining prestige would cancel one another out and the true gender effect would be lost due to this suppression effect. Once the data-complex change

variable is included within the model, it serves as a control and the increasing proportion of women in professions still has a positive effect on 2005 profession prestige.

Summary

A subset of the original 26 professions was tested to see if, in 1965, female-dominated professions received higher mean prestige from women than from men. In describing the tendency of these trends, women were more likely to give higher mean prestige ratings for both male and female-dominated professions. The mean prestige ratings in 2005 did suggest a narrowing of the rating gap between male and female-dominated professions as women gave higher prestige to male-dominated professions in 1965 than in 2005.

In order to track the change in the influence of a profession being male or female dominated on prestige, two time points were tested. The effect of gender dominance within professions was significant in 1965 and at the mid-point between 1965 and 2005 but by this time, a greater proportion of women in a profession resulted in a negative influence on prestige. This may be a result of the increase of women in the labour force moving into non-traditional work. Perhaps the slight decrease in the overall influence of being female-dominated is a result of respondents being less influenced by who, or what gender, was working in a profession.

One limitation to this analysis is that so few female professionals in the 1960s and 1970s make it difficult to know where they would have stood in terms of prestige. A high number of men in professions in the 1960s may have resulted in a false sense of prestige. Simply because men had a greater presence in the workforce may have contributed to views where the roles that men played had greater prestige than women's roles. By 2005, we see that the gender proportion found in professions still does contribute to overall prestige, although less than in 1965. Some may argue that not having the same individual rate the same professions in 1965 and again in

2005 is a limitation. Even if these same individuals were available to be surveyed again 40 years later, they would not be the same person they were in 1965 due to life development and social changes that influenced their world views. These influences make it impossible to predict or anticipate one individual's sentiments across a 40-year time period.

In predicting 2005 prestige, the type of work, either data or people, and the characteristics of individuals within professions influence the prestige ratings of professions. Education was an insignificant predictor of prestige over time. Prestige of professions in 2005 was positively influenced by change in income, change in people-complex work, change in female proportion, and having female raters. Prestige was negatively influenced by change in data-complex work and having male raters. The potential suppression effect of data-complex professions decreasing in prestige and professions with greater proportion of women increasing in prestige was mediated by including holding the data-complex change variable constant in the model. Gender still had a positive influence on the prestige of professions.

Examining how changes in income, education, data versus people-complex work, and gender proportion influence occupational prestige provides an understanding of how the general public views professions. This analysis is conducted at the title level and given that the average respondent is not knowledgeable about professions' more detailed and internal characteristics, exploring the impact of gender within one profession offers greater understanding of the role of gender in prestige discussions. Looking at the internal stratification of the legal profession begins to delineate how a fixed characteristic, such as gender, can impact individual prestige within a profession. Exploring the position and prestige of women and men within the legal profession offers additional information on occupational prestige and its potential to have a compounding influence on a professional's career.

7. The Legal Profession and Internal Stratification

"I pondered what effect poverty has on the mind; and what effect wealth has on the mind and I thought how unpleasant it is to be locked out and of the safety and prosperity of the one sex and the poverty and insecurity of the other."
(Virginia Woolf 1929:207)

As a case study to account for stratification within a profession, this chapter will look into how lawyers allocate prestige within the legal profession based on gender and the type of law or specialization practiced. As Rossides (1998:252) describes, "lawyers are deeply stratified by social class, race, ethnicity, and gender, and by the class of their clients. These forces, in addition to the emergence of an almost numberless increase in specialized fields and subfields of legal practice have rendered the term *lawyer* almost meaningless." As law has grown it has increased in the number of specializations. The following analysis is unique in that the public is not as familiar with specializations and has only been asked to rank the profession as a whole. This analysis asks lawyers to rank the prestige of specializations within law.

The legal profession has been included throughout all of the previous analysis, as one of the 26 titles. Lawyers' long history as a profession gives reason to take a deeper look into their prestige. As seen in Chapter Four, lawyers held a great amount of prestige but saw it decline over the past 40 years. The data from this study show a loss, albeit a small one, in prestige from the public and this analysis will provide a look into how prestigious lawyers view the different areas or fields within law. As a typically male-dominated profession, law has experienced a huge influx of women. Women in law face two types of internal stratification that influence the prestige they receive: the power or authority that comes with becoming a partner and the respect or prestige that is associated with different areas of law. Women are typically found in the lower echelons of law, less likely to be a partner within a firm and in less lucrative areas (see Kay

1991; Kay and Hagan 1995; Kay et al 2004, 2006). The *1995 Chicago Layer Survey* data provide insight into what ranks and fields women lawyers are practicing and the lawyers surveyed were asked to rank areas of law by prestige. This information provides a means to identify power and prestige differences experienced between genders and among fields.

7.1 Sex Segregation

Previous research indicates that men and women are not found in equally prestigious areas of medicine and law and therefore do not have the same opportunities to influence the future of the profession. In thinking about this imbalanced power, Freidson (1986:185-6) asks,

> "who…creates, sustains, and alters the official frame work of professional activities – the credential system that establishes staffing standards for employers and standards for the content of professional training? And who establishes the standards that define the substance of what is acceptable professional work? Who negotiates with the state to secure the official adoption of professional standards across work settings?"

In the case of law, women are still in a male-dominated profession and continue to face the glass ceiling barring their advancement (Kay 1991). Even though more women are entering law, the profession still exists within a male culture with male career path expectations. It is still the case that women have difficulty reaching partnership despite their increasing numbers in the profession (Epstein et al. 1995:65).

Internal stratification is evident within law and research has shown that the more highly organized occupations result in gender segregation (Jacobs 1999:130). Bolton and Muzio (2007) argue that women lawyers are not in prestigious and lucrative areas of law due to *stratification*, where women are kept out of senior positions that are most often salaried, *segmentation*, where women spend more time in low prestige areas of law, and *sedimentation*, where women lawyers

continually practice in a particular area of law until they feminize and control these areas. Segregation of women and men by specialization results in sedimentation where women are concentrated in the areas that they are able to enter. The consequent feminizing of that area results in the devaluation of the work performed as it becomes known as a women's specialization where work is considered less lucrative and clients are less prestigious. An example of sedimentation within law is family law where compensation is lower and clients are often women who may have few resources (see Kay 1991). Family law has typically been associated with female traits leading women lawyers to be more accepted in this area, making it a female-dominated area.

7.2 Internal Stratification

Law is categorized as a people-complex profession by the CCDO/NOC and, based on previous gender-dominated analysis, the legal profession should have a high proportion of women now in comparison to 40 years ago. Armstrong's (1993:143) research reveals that when managerial, professional and technical occupations have gained a significant proportion of women, these women are primarily concentrated in the lower-end positions within these categories. For instance, fewer women were partners and more likely to be associates in law firms and more women were found to be general practitioners rather than surgeons (Armstrong 1993:143). This speaks directly to the internal stratification that is hidden within the professions. In terms of differences in positions within law, by 2004 the same number of men and women graduated from the University of Michigan Law School, but men were more likely to enter private practice and were twice as likely to become partner (McKenzie Leiper 2006:145).

From earlier in the literature review, we know that in 1991 in Ontario law firms 33 percent of men and 13 percent of women were currently partners while 25 percent of men and 36 percent of women were considered employees/associates (Kay 1991:19). This clearly shows the imbalance of power and authority at that time. Hagan and Kay (1995:84) examined two samples of lawyers, one from Toronto who were interviewed in 1985 and again in 1991 and one from Ontario who were interviewed once about their experience in 1975 and 1990. In Toronto in 1985, 80 percent of lawyers were men and this number increased to 83 percent by 1991 while in 1975 across Ontario 71 percent of lawyers were men and increased to 74 percent in 1990 (Hagan and Kay 1995:85). The Ontario sample shows the higher number of women lawyers across the province as the male representation is much lower than the Toronto representation. In terms of making partner, in the Toronto sample 60 percent of men and 42 percent of women made partner by 1991 and in Ontario 49 percent of men and 25 percent of women had made partner (Hagan and Kay 1995:85). These figures demonstrate the power differential between genders during this period. Hagan and Kay (1995:89) found that having higher-status specializations led to more corporate clients which in turn led to a greater likelihood of becoming a partner. Men were more likely to have a greater number of corporate clients (Hagan and Kay 1995:89). Putting background, experience and full versus part-time practice aside, having more corporate clients increased the chances of becoming partner and parental leave reduced chances of becoming a partner (Hagan and Kay 1995:89).

Inequality between men and women lawyers extends to earnings. Men's salaries are 32 percent higher than women's, "the gender differences in partnership status and salary levels are apparent even when men and women have the same work histories (McKenzie Leiper 2006:145-6). The mean incomes of men and women in the Ontario legal profession are greater at every

point along their careers. The 2001 Census data show that a $4,000 gap between lawyers between the ages of 20 to 29, increases to $24,000 between the ages of 40 to 44, and finally increases to $67,000 for those between 55 to 59 years of age (McKenzie Leiper 2006:146).

A Toronto-based study of the legal profession revealed that women were primarily found in the lower echelons of law without much power or freedom (Kay 1995). The media have also picked up on women being channeled into particular roles within the legal profession, "within more traditionally structured law firms and partnerships, women often have been segregated into junior ranks and nonsupervisory positions. The gender stratification within traditional law firms has been labeled the "mommy track" by the popular press, referring to the proliferation of part-time female associates, usually with small children at home" (Leicht and Fennell 2001:170). Bolton and Muzio (2007:48) found that among lawyers in England and Wales, women were also found at particularly low levels within the legal profession. Women are less likely to be partners because the format of the legal industry is to find clients for the firm, however, women with added domestic responsibilities may not have time and therefore tend to make the choice to work in-house in a corporation where they only serve one client (Leicht and Fennell 2001:180). This can lead to lower earnings, fewer contacts and lowered prestige as in-house lawyers do not gain respect for bringing in new clients as is often the case in firms. Bolton and Muzio (2007:60) have found that,

> "although entry to the profession (occupational closure) focuses on individual merit and accomplishment and has facilitated the admission of women solicitors, movement in the profession (organizational closure) is influenced by collective criteria which respond to the ascriptive biases of gender and which are largely responsible for keeping women in a position of subordination."

7.2.1 Gender Dispersion across Legal Titles

According to Bolton and Muzio's (2007:48) work, women were not found to be partners as often as their male counterparts, they worked more part-time hours and they were more likely to be found in less lucrative legal specialties (for example, family, employment, and benefits law). The *1995 Chicago Lawyers Survey* is not meant to be used as a direct comparison with the earlier analysis because the respondents are lawyers and the information is dated. Instead, the information is to be viewed as supplementary, offering a unique opportunity to explore lawyers' views of the prestige of their own profession and the specializations within their field. The *1995 Chicago Lawyers Survey* data set contains 848 respondents. Once all those who identified their titles as "other" and missing cases were removed, 485 cases remained. The data set contains 27 percent (or 131) women and 73 percent (or 354) men and 47.7 percent or 230 individuals within the sample are partners and 37.9 percent or 184 individuals are associates. Although other job titles within law are provided in the data, this analysis will focus on partners versus associates as these are two major distinctions within law and the sample contains a large enough sample within these categories to confidently assess their influence. When we look at Table 7.1, among women, only 15.3 percent are partners in the sample compared to over 59.3 percent of men. Among women, 54.2 percent are associates, while a lower percentage of men, 31.9 are in this role.

Table 7.1

Legal Title by Gender

Job Title		Gender		
		Female	Male	Total
Associate	Count	71	113	184
	% within Gender	54.2%	31.9%	37.9%
Partner	Count	20	210	230
	% within Gender	15.3%	59.3%	47.4%
Staff Attorney	Count	25	14	39
	% within Gender	19.1%	4.0%	8.0%

Supervising Attorney	Count	8	4	12
	% within Gender	6.1%	1.1%	2.5%
General Counsel	Count	7	13	20
	% within Gender	5.3%	3.7%	4.1%
Total	Count	131	354	485
	% within Gender	100.0%	100.0%	100.0%

x^2=.001, df=4, p <.001

The distinction between holding and not holding partnership is a major differentiator between men and women in both this sample and in Ontario and Canadian (see Kay et al 2004, 2006) samples. The differences in power and prestige exist on this broader level but also permeate into what may appear to the public as more subtle differences when examining specializations.

7.2.2 Dispersion across Legal Specializations

When the specializations of law are examined across the data set, Table 7.2 shows the largest areas of practice are civil litigation (18.5 percent) and probate/real estate (15.7 percent). The smallest representation within the sample are in the areas of environmental (3.0 percent), family (3.8 percent), and intellectual law (3.8 percent). In my analysis, legal specializations are condensed so that a lawyer must practice a minimum of 70 percent of his or her time in one area to be associated with that specialization.

Table 7.2 provides the proportion of women and men lawyers that are concentrated in each specialization. Most women lawyers in the sample are found in personal injury (17.2 percent), business/commercial (16.1 percent), civil litigation (13.8 percent), and criminal law (13.2 percent). Most men lawyers are found in civil litigation (20.6 percent), probate/real estate (18 percent), business/commercial (13 percent), and personal injury (10.8 percent). These

relationships are significant in a chi-square test (p< =.001) where the relationship between gender and specialization are related and not independent.

Table 7.2

Dispersion of Gender across Legal Specializations

			Gender		
		Total	Female	Male	Proportion of Women Practicing Compared to Men
Business/Commercial	Count	80	28	52	-24
	% within Gender	14.0%	16.1%	13.0%	3.0%
Civil Litigation	Count	106	24	82	-58
	% within Gender	18.5%	13.8%	20.6%	-6.8%
Criminal	Count	46	23	23	0
	% within Gender	8.0%	13.2%	5.8%	7.4%
Employment	Count	45	19	26	-7
	% within Gender	7.9%	10.9%	6.5%	4.4%
Environmental	Count	17	5	12	-7
	% within Gender	3.0%	2.9%	3.0%	-0.1%
Government	Count	31	8	23	-15
	% within Gender	5.4%	4.6%	5.8%	-1.2%
Intellectual	Count	22	4	18	-14
	% within Gender	3.8%	2.3%	4.5%	-2.2%
Taxation	Count	41	4	37	-33
	% within Gender	7.2%	2.3%	9.3%	-7.0%
Family	Count	22	11	11	0
	% within Gender	3.8%	6.3%	2.8%	3.5%
Probate/Real	Count	90	18	72	-54
	% within Gender	15.7%	10.3%	18.0%	-7.7%
Personal Injury	Count	73	30	43	-13
	% within Gender	12.7%	17.2%	10.8%	6.4%
Total	Count	573	174	399	
	% within Gender	100.0%	100.0%	100.0%	

N=575, excludes all missing cases and individuals who did not spend at least 70 percent of their time practicing in at least one area of law

From 2003 Canadian data, we know that the top fields of specialization for women are family or divorce law (13 percent of women and seven percent of men) and "Other" (includes Aboriginal rights, adjudication/mediation, constitutional law, debtor's and creditors' rights, human rights and *Charter*, landlord and tenant, and legal policy work) (16 percent of women and

11 percent of men) (Kay et al 2006:213). The top fields of specialization for men are real estate (16 percent of men and five percent of women) and civil litigation (18 percent of men and 15 percent of women) (Kay et al 2006:213). Using the *1995 Chicago Lawyers Survey*, a descriptive perspective identifies the difference in the dispersion of gender within each specialization. For instance, Table 7.2 shows that of those practicing individuals, fewer women are practicing probate/real estate (-7.7 percent), taxation (-7.0 percent), and civil litigation (-6.8 percent). This is somewhat similar to the more recent Canadian findings.

Hagan and Kay's (1995:89) early 1990s research shows that lawyers gave higher prestige to taxation, corporate and commercial law and civil litigation and they gave lower prestige to family, criminal and real estate law. We see in Table 7.2 that men are more highly represented in some of the more prestigious areas of law such as civil litigation and less represented in low-prestige areas such as family and employment (see earlier Bolton and Muzio 2007), These raw numbers identify differences within this data set; however, when the type of law is regressed onto gender, it is insignificant. In other words, we cannot predict the type of law that a man or woman practices with any accuracy.

The organization or categorization of occupations in the NOC or the CCDO categorizes professions as a group without a level of detail that brings out specific differences in the level of skill or type of training required within a profession that only those practicing would recognize. In this sample, the respondents are lawyers who have insight into more subtle prestige differentiators existing by specializations.

The task given to respondents was "we would like you to rate each of these areas of practice in terms of its prestige within the profession at large" and respondents were given five options to rate areas with: poor, below average, average, above average, and outstanding (Heinz,

et. al. 2006). Table 7.3 shows that of those allocating higher than average prestige (three or more out of five prestige levels), probate/real estate has the most respondents giving it their highest prestige ranking (44.9 percent), followed by personal injury (20.2 percent), taxation (9.1 percent), and intellectual (5.2 percent). Notably, in all but personal injury more men than women practice in the top four prestigious areas: probate/real estate (7.7 percent more men), taxation (7 percent more men), and intellectual (2.2 percent more men).

The least prestigious areas of law according to the sample are: employment (0.1 percent), environmental (0.3 percent), business/commercial (0.5 percent), and criminal (0.7 percent). In all but environment law more women practice in these least prestigious areas of law: employment (4.4 percent more women), business/commercial (3.0 percent more women), and criminal (7.4 percent more women). These four less prestigious areas have extremely small numbers of respondents assigning them as the most prestigious making it clear these areas carry little, if any prestige among lawyers.

Looking at family law, 3.0 percent of respondents believed this to be the most prestigious area of law and from the last column of Table 7.3 we see that there are 3.5 percent more women practicing in that area. This table mirrors previous literature that concludes men lawyers are more likely than women lawyers to practice in more prestigious areas of law.

Table 7.3
Dispersion of Prestige Across Specializations

Specialization	Respondents Giving Highest Prestige Level	Respondents Giving Highest Prestige Level (%)	Proportion of Women Practicing Compared to Men
Probate/Real	385	44.9%	-7.7%
Personal Injury	173	20.2%	6.4%
Taxation	78	9.1%	-7.0%
Intellectual	45	5.2%	-2.2%
Family	26	3.0%	3.5%

Government	23	2.7%	-1.2%
Civil Litigation	13	1.5%	-6.8%
Criminal	6	0.7%	7.4%
Business/Commercial	4	0.5%	3.0%
Environmental	3	0.3%	-0.1%
Employment	1	0.1%	4.4%
Total	757	100.0%	

N=757, excludes all missing cases and includes all respondents who provided prestige ratings

The areas where more women are concentrated are less prestigious (for example, family and criminal). There are more women than men lawyers in criminal, personal injury, employment, family, and business/commercial. From Table 7.3, aside from personal injury (20.2 percent), these specializations are among the least prestigious. The men lawyers in this sample are concentrated in the more prestigious specializations.

One factor that must be taken into account is that the sample is comprised of a male majority (69.8 percent of the sample). To account for this male majority and potentially skewed prestige results, a logistic regression model was used to test the effect of gender. Gender differences in prestige level of a specialization were not significantly related. A power differential does exist based on numerical representation. The simple fact is that of those respondents in the data set, more men hold partner positions than women. Men continue to hold more secure and lucrative positions in the legal profession while women are predominantly found in the lower ranks of law to bring in clients and perform types of law that are undesirable.

Bolton and Muzio (2007:49) argue that the large pool of women lawyers are being informally excluded from more prestigious areas of law while providing labour for the less prestigious, less lucrative and less powerful positions, allowing men to continue to hold the power and prestige within the profession. Similarly Fiona Kay's (1991) *Transitions* report found large differences between men and women in terms of power and authority within law. One woman speaks about her experiences of being held back in the legal profession,

> "I began practice when women were not yet common in the profession. My opportunities were unquestionably deleteriously affected by being a woman --- in respect to work, advancement, personnel matters, and general well-being… [F]or the most part the legal profession is a men's club. Misogyny, sexism and sexual harassment are often the norm…" (Kay 1991:84).

Summary

The purpose of exploring the internal stratification of law is to help interpret the gender findings expressed earlier. One lawyer interviewed by Hagan and Kay (1995:103) observes that "being a male-dominated profession, I do not think there is a very strong incentive for anyone to change things. Law is meant for the young, eager, single-minded person willing to lose their life in it for five to ten years, not for someone who wants a life outside of law." Although this comment was made over a decade ago, it is interesting to note similar sentiments among those lawyers interviewed in McKenzie Leiper's (2006) work.

As we have seen, women lawyers are less likely to be found in more powerful positions such as partners and carry less prestige in their specializations than men. Women are found to be in what are considered to be less prestigious legal fields.

Viewing culture and prestige as dynamic fits with Alexander's (1972) notion that certain personal characteristics are fixed, but we can attempt to change people's perceptions. For instance, we can attempt to change the perception of women lawyers and type of legal practice connected with income and prestige.

Internal stratification carries influence within professions and impacts public autonomy and access. Internal stratification is found in more and more occupations as knowledge and training opportunities continue to expand. The influence that internal stratification carries with professions is often unnoticed by those outside the profession. These divisions impact individual

earnings, potential promotions, respect received, and people within a network. Extreme differences in these factors can be found within professions.

Professions are continually expanding and this includes finer specializations. Specializations require longer training and result in more esoteric knowledge and a monopoly on that knowledge and skill. An increase in the length of training limits access to individuals wishing to enter a profession and specialization to those who can afford to invest the money and time.

By increasing specializations, professions can continue to hold knowledge and skills that are not available to the public and remain in control of the distribution and cost of this knowledge. Specializations allow professions to regain some of their monopoly that has been lost as the new economy has opened opportunities for public access to previously inaccessible knowledge.

8. Conclusion

The purpose of this research has been to investigate why Canadian professions have, paradoxically, lost ground in prestige relatively, despite being the prototype for the expanding new economy. The traits emerging within the new economy are often shared with those of professions. Individuals may not have the same perspective on professions, nor have the same reliance on professions they once had due to the technology of the new economy. In 1965, occupational prestige had an essentially rectangular distribution among the 26 professions. The public gave higher occupational prestige in 2005 but narrowed its dispersion; this indicates that the public did not give as great a range of prestige scores across professions. The 2005 data show that public perception of the prestige of the same 26 professions has been squeezed, showing fewer extreme scores. Many professions gained occupational prestige over this 40 year period; however, professions generally did not gain as much in comparison to all other occupations. In predicting 2005 occupational prestige between 1965 and 2005, the change in income, data and people-complex tasks, gender of incumbents, and the gender of the rater have all had an impact on the prestige that professions receive.

Women's change in numerical representation within professions increased the 2005 prestige ratings of professions. As equality between genders is more widely assumed there may be less concern for the incumbent composition of a profession. Shifting back to viewing and utilizing one measure of prestige presents a risk of overlooking gender's role as the literature and findings demonstrate that gender continues to influence prestige findings. Until the incumbents of professions, and all occupations, are a reflection of society's demographics, we cannot assume equality. A more detailed discussion of all of these findings, their implications, limitations, and foundation for future research follows.

8.1 Discussion

As is typical of occupational prestige research, the overall amount of explained variance is small at the level of the respondent-rater due to dissensus. Similarly the change variables within my analysis will inevitably produce small variance explanations due to the number of potential variables and nuances involved in measuring prestige. In 2005 other occupations moved up the prestige ladder to a similarly high level or ceiling of prestige where professions sat and witnessed a relative loss in their prestige. This prestige change is relative, not absolute because some professions fell and some did not in terms of prestige. Change in prestige was examined within this ceiling effect.

The new economy should have brought an increased respect and status for occupations that utilize creativity, promote innovation, perform in fast-paced environments and utilize technology. This openness to creativity and risk taking provides opportunities and the potential for success to individuals who do not wish to work within the confines of the long-standing rules and work style associated with many professions. As Goyder (2005) pointed out, technology has provided public access to knowledge in order to perform tasks that would ordinarily only be available through the services of a professional. In order for professions to retain what prestige they have, they must be more open to sharing their knowledge and working with other occupations to sell their knowledge in a new format that is valuable to the public. This shift would also open up opportunities for other occupations to share in this knowledge and be creative in disseminating it to the public.

Opposite to the hypothesis that as more women entered professions between 1965 and 2005 the prestige would decline, gender had a positive impact in the prediction of 2005 prestige. The positive link between women in professions and increased prestige over time may be a result

of raters letting go of stereotypes about gender-appropriate work. The public may expect to see more women in professions, making their presence more common.

Contrary to the hypothesis that as professions gained in education they would also gain in prestige, the analysis did not provide any significant findings. Typically professions all have higher education and the educational requirements have not changed dramatically over the examined time period. This stability in education would not bring about an influence in prestige change. In accounting for the relative gains or losses in prestige for one profession against another, we saw that the change in income of professions increased the predicted 2005 prestige. As Treiman (1977:5) argues, money is a source of power and creates prestige.

Surprisingly as professions gained in data-complex tasks or work they did not gain prestige, but actually lost prestige. This loss may be due to the prevalence and integration of data and technology use into all occupations. This anomaly may be a reflection of Goyder's (2005) commentary on how more technology has brought about less need for the public to call on the services of professionals. This access opens up opportunities to learn, and user-friendly programs take away some of the mystery behind advanced computations or design.

People-complexity within professions increased over time as did prestige. People-complex tasks and work were expected to lose prestige given the characteristics of the new economy, including greater technology use. This increase could be a reflection of the service economy that has become more prevalent over the past 40 years. Many professions offer their skills in the form of a direct service to the public, for instance, with minimal effort and involvement clients often have their taxes completed and submitted by an accountant. This increase in prestige may also be due to greater concern for the individual and health, both

physical and mental. Opting to visit a psychologist is much more common and socially acceptable today.

More women entered data-complex professions, which saw a decline in prestige, over the 40 year period and would also result in the decline of women's prestige. Women have remained a significant force in people-complex professions, although less than in 1965. When the influence of data and people-complex work are included in the analysis we still see a gain in women's prestige over time.

Male and female raters did not give significantly different prestige ratings to professions dominated by men or women. This may be another indicator that an incumbent's gender is not as strong as it used to be in driving prestige allocation. Over time female raters were significantly more likely than male to give positive prestige ratings and predicted higher 2005 prestige scores. Male raters had a negative influence on predicting prestige scores over time. This difference in raters was not linked to the gender composition of a profession. A greater representation of women in professions may influence female raters to attribute greater prestige to professions generally, as they see more professionals like themselves.

According to analysis, men and women lawyers are not similarly represented across legal positions and areas. Men were more likely to be partners and women were more likely to be associates resulting in power and upward mobility differences. Based on the distribution of men and women lawyers across legal areas, in all but environment law more women practice in what were considered to be the least prestigious areas of law: employment, business/commercial, and criminal. In previous literature and research, family law is considered to be a less prestigious legal area and my analysis also reflects these findings. Approximately three percent of respondents believed this to be the most prestigious area of law and there were three and a half

percent more women practicing in that area. Findings mirror previous literature that concludes men lawyers are more likely than women lawyers to practice in more prestigious areas of law.

8.2 Research Limitations

Limitations to my research include inherent difficulty of measuring so subjective a variable, older sample, the use of proxies and sometimes unsophisticated variables, and a lack of variables to capture characteristics of the new economy. Individuals' criteria behind giving an occupational prestige rating or how much weight they give to each of the criterion in their overall ratings do not affect the ratings. Nor are raters provided with a series of characteristics to consider when rating an occupation. These ratings are therefore a subjective interpretation of the prestige of occupations. Using other variables, such as income and education, can be useful to understanding the prestige individuals attribute to occupations if an average of the presence of these variables within an occupation is collected. My research is able to take more objective measures of the characteristics and prestige scores into account but is unable to speak to any societal events or trends that may have impacted how the public views particular professions. For instance, the increase in income of professions can be measured for each profession but the impact of an event that is socially unacceptable or, by contrast, seen as heroic is not measured. This subjective element is present in any opinion-based research.

By not restricting individuals to consider set criteria or forcing a particular view of prestige upon raters, the information they supply is based on the perspective each individual has picked up through his or her experiences. This open method inadvertently captures influences that societal events or experiences may contribute toward an individual's perspective on prestige. Prestige ratings are always complex and difficult to capture in a variable because of the various contributing facets. Societal events such as September 9/11 or health outbreaks such as SARS

can influence public perception of particular occupations and their value, which is not captured through the quantitative survey questions of this sample. Public knowledge about the complexities of professions and internal power differentials, opportunities, and mobility is often limited. Public understanding of job requirements and tasks varies extensively and limits the amount of detail captured in the prestige rating variable. These prestige ratings do provide the average conception of a profession's value to and place in society, which is the ultimate goal.

Secondly, my main sample uses random sampling to generate pairs of individuals rating professions over time. These cases are proxies which serve the purpose of comparing an individual rating a profession in 1965 and then again in 2005. The matches are not the same individual being asked to rate a profession at two different points in time, but they mimic this process. Being unable to control for societal events, it is safe to use these proxies because an individual in 1965 would technically not be the same person, in terms of outlook and perspective, in 2005. The law survey is dated and the sample, being older, is not a perfectly accurate reflection of the current perceptions that lawyers have about areas of law and the prestige associated with these areas. This sample is also from the United States and does not match the other Canadian sample I have used in my analysis. Based on more recent literature, including Canadian, it appears as though similar trends are still occurring. Men are more likely to be partners and be in higher-prestige positions.

Thirdly, using the CCDO/NOC ratings for the level of complexity of tasks related to data and people is an imperfect measure of the interaction a profession has with either characteristic. The ratings are not perfectly hierarchical and some professions that one would expect to be higher on data or people may in fact fall to the opposite characteristic. A profession may have a significant amount of interaction with people, but this interaction may not be reflected in the

ratings or be at a different level of complexity that is less intuitive. For instance, registered nurses and teachers would be expected to be people-complex professions however, when their tasks are examined closely, their work is quite data-heavy in preparation and recording. The level of complexity working with data exceeded that of working with people. The CCDO/NOC coding is an imperfect measure of occupations' work with data and people for my analysis. A more accurate ranking of the level of interaction and time spent with data or people would be ideal.

Fourthly, the education variable is a crude measurement that makes the distinction between those with post-secondary education and those with elementary education. Fewer individuals had post-secondary education in 1965 and this variable reflects that truth. A more detailed education variable that made distinctions among levels of post-secondary education, apprenticeships, examinations, and certifications would provide a better understanding of the education distribution across the sample and allow for more specific comparisons.

Fifthly, variables to capture the traits of the new economy are unavailable in the current data set. Examining professions because they share similar characteristics was one attempt to better understand the effects of the new economy on prestige. The new economy is described as creative, innovative and possessing an element of risk. Variables for these traits are not included in the data but the levels of creativity, innovation and risk required of a profession would provide a helpful understanding of how aligned a profession may be with the characteristics of the new economy.

8.3 Future Research

Although the current research dealt with the element of gender through a quantitative approach, further research into the internal stratification of professions would lend itself nicely to

more qualitative work. Tapping into individuals' subjective evaluation of professions may provide further insight into the considerations they use to rate professions and specializations. For instance, asking individuals to identify criteria used to determine ratings or asking them to rate the type of doctor or field of medicine would give insight into public interest and priorities.

Another consideration for future research is investigating geographic differences in gender ratings; the idea that the dispersion of women and men across professions differs by country, region and society. While this project outlined how men have dominated professions in Western society, other societies are reversed. For instance, dentists are primarily female in Denmark and Poland, and physicians are primarily female in Russia. Professions used in this analysis may not be as highly regarded as they are in Western society, there may be greater or fewer career choice opportunities, there may be more or less stereotyping based on gender, and these differences may contributes to different female representation in other societies.

Future research on regional influences on prestige allocation would bring insight to hiring practices. Provinces and territories within Canada differ by economy and population, and a shortage of particular professions, such as physicians, in some provinces may influence the prestige associated with that profession. Provinces and territories with low populations and geographical limitations have difficulty recruiting certain professionals to their area and this may increase the amount of prestige professions receive in that geography. With the increase in technology and the new economy's stress on creativity and innovation, many professions may not have to be physically near clients. For instance, accountants can perform their services with the use of computers and the Internet. Technological advancement and creative ways of allowing the public to access services may reduce the prestige of certain professions as they are able to perform their services from a distance, and much faster.

Information collected on elements of the new economy such as the level of creativity, risk taking or the education truly necessary or utilized in a profession would provide a more solid link between prestige and professions. This type of research would help predict the need or extent to which an individual must attain particular levels of education or other characteristics to pursue a profession.

8.4 Conclusion

According to Alexander (1972), prestige is not a fixed attribute like sex, race, ethnicity, or family background, and as a result it has the potential to be changed or revised. As we see a change in the public's perception of gender-appropriate jobs, this will lead to a change in the prestige of occupations. As in the legal profession, increases in prestige may also be accompanied by increased respect, increased resources to perform work, increased income, and greater mobility to pursue areas of interest within a profession.

Between 1965 and 2005, professions have had a relative decline in prestige compared with non-profession occupations. Within this context, as more women have entered professions, the prestige of professions has increased. Assumptions about gender-appropriate occupations or professions may have declined over this 40 year period, but gender still plays a role in the prestige outcome of professions. Increased women and public prestige ratings indicate that women professionals are generally viewed as valid contributors in their fields. Perhaps women seek out women professionals for services because of shared characteristics or potential understanding. This increase in women professionals and increased prestige trend is encouraging for women pursuing professional careers. This finding is also encouraging for other minority groups such as visible minorities, Aboriginal peoples, and people with disabilities. As the labour

market becomes increasingly diverse so does its customer base, and the better match of practitioner characteristics to client or customer characteristics may offer greater business opportunities. Diverse incumbents bring new solutions and ways of working. Professions that welcome diversity will experience greater innovation and creativity, valued in the new economy, which may garner greater prestige from the public.

The potential to revise prestige associated with particular professions presents an opportunity to influence individual career objectives by offering support and encouragement to enter professions to those unlikely to do so. Re-defining or re-characterizing occupational prestige may promote the entry of more individuals into typically low-status occupations and may persuade individuals to pursue occupations they are interested and skilled in, potentially increasing much needed participation in the trades. A new conception of prestige may also shift some of the extreme control over knowledge and resources by those attributed high prestige, to those who typically experience very low-prestige consequences.

Internal stratification carries influence within professions and impacts public autonomy and access. Professions are continually expanding and creating finer specializations. An increase in the length of training may limit access to individuals wishing to enter a profession and specialization, to those who can afford to invest the money and time. These costs will perpetuate the cycle of typically well-off individuals entering these occupations. Specializations allow professions to regain some of their monopoly that has been lost as the new economy has opened opportunities for public access to previously inaccessible knowledge. Professions continue to maintain an elite status by remaining gate keepers to knowledge.

This project examined the public's perception of professions, allowing respondents to use the criteria they considered when making the ranking decision. I believe that respondents'

subjective choices are what will ultimately drive the future of the professional economy. This combination of influences on occupational prestige is important to investigate as the world experiences increased globalization, bureaucracy, and retreats back to concentrating more on the collective than the individual. The individual is still an important part of society, as the individual is society's fundamental derivation, and to ignore individual evaluation or thought would leave a bitter lack of hope for those living within it.

The new economy is pushing professions to share knowledge or increasingly stratify, and education, innovation and risk are large influences. A decline in such long-standing prestige may be a source of stress for professionals who have typically relied on their esoteric knowledge, autonomy, and monopoly to surpass the power, privilege and prestige of the general public. On the other hand, this loss of prestige may open new doors of opportunity to the public as they become more privy to, what was once, very carefully held professional knowledge. This dissipation of knowledge gives the public a greater awareness and autonomy over the choices influencing their lives.

The words "if men define situations as real they are real in their consequences" speak to the entire framework of this research (Thomas, 1928). Individual perception gives or takes away prestige and, throughout it all, how this prestige is defined by individuals or the public will ultimately determine how they experience the new economy and professions, and their reaction to this interaction.

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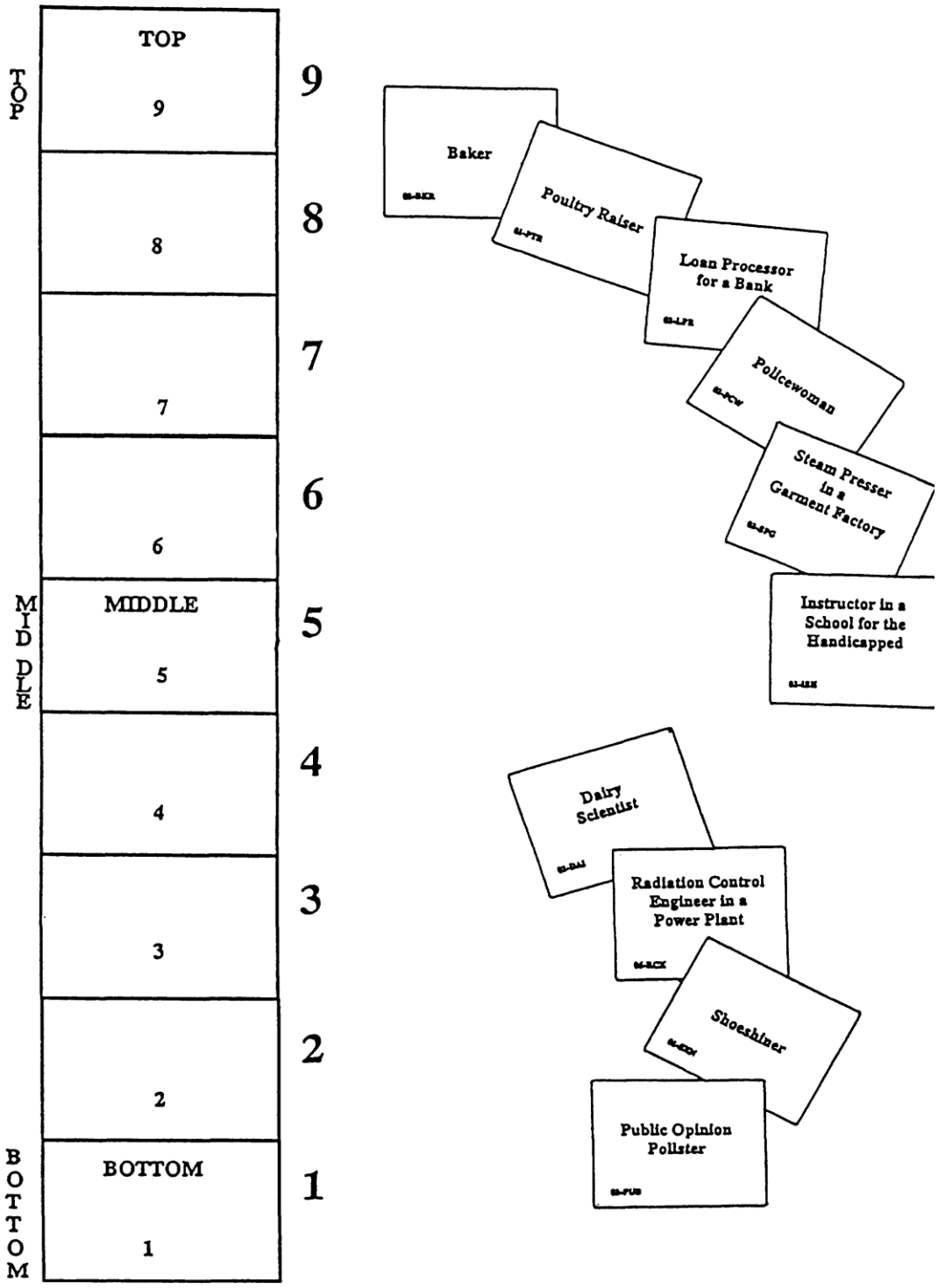
Appendices

Appendix A: Occupational Prestige Instrument



Nakao and Treas 1994:38

Appendix B: Pavalko's Occupation-Profession Model

Dimensions		Occupation		Profession
1. Theory, intellectual technique		**Absent**	——	**Present**
2. Relevance to social values		**Not relevant**	——	**Relevant**
3. Training period	**A**	**Short**	——	**Long**
	B	**Non-specialized**	——	**Specialized**
	C	**Involves things**	——	**Involves symbols**
	D	**Subculture unimportant**	——	**Subculture important**
4. Motivation		**Self-interest**	——	**Service**
5. Autonomy		**Absent**	——	**Present**
6. Commitment		**Short term**	——	**Long term**
7. Sense of community		**Low**	——	**High**
8. Code of ethics		**Undeveloped**	——	**Highly developed**

Pavalko, 1971

Appendix C: Pineo and Porter's Professional and Semi-Professional List

Professional	Semi Professional
Accountant	Airline Pilot
Architect	Author
Biologist	Ballet Dancer
Catholic Priest	Chiropractor
Chemist	Commercial Artist
Civil Engineer	Computer Programmer
County Court Judge	Disc Jockey
Druggist	Draughtsman
Economist	Funeral Director
High School Teacher	Jazz Musician
Lawyer	Journalist
Mathematician	Medical or Dental Technician
Mine Safety Analyst	Musician
Mining Engineer	Musician in a Symphony Orchestra
Physician	Physiotherapist
Physicist	Playground Director
Protestant Minister	Professional Athlete
Psychologist	Professionally Trained Forester
Public Grade School Teacher	Professionally Trained Librarian
University Professor	Registered Nurse
Veterinarian	Research Technician
	Sculptor
	Social Worker
	Surveyor
	T.V. Announcer
	T.V. Cameraman
	T.V. Director
	T.V. Star
	YMCA Director

Pineo and Porter, 1967

Appendix D: Two Types of Knowledge

Focus of knowledge		Codified	Tacit
	Individual	Functional expertise; occupational identity	External hiring; retention of scare expertise
	Collective	Vertical career paths; functional specialization	Rotation to broaden expertise
		Knowledge form	

Timothy Morris (2000:146)

Appendix E: Women as a Percentage of Professions

Profession	Women as a % of profession 1961	Women as a % of profession 1971	Women as a % of profession 1981	Women as a % of profession 1991	Women as a % of profession 2001
Accountant	5.10%	15.70%	47.10%	47.20%	52.80%
Airline pilot	0.30%	0.60%	3.30%	5.00%	5.00%
Architect	2.20%	2.70%	8.80%	18.80%	20.00%
Biologist	16.10%	25.60%	31.30%	36.90%	45.90%
Catholic priest	0%	0%	0%	0%	0%
Chemist	7.20%	11.70%	20.00%	29.60%	38.50%
Chiropractor	8.40%	6.90%	14.50%	26.50%	27.70%
Civil engineer	0.20%	1.00%	2.90%	7.60%	10.70%
Computer programmer	15.10%	15.30%	29.00%	30.40%	27.30%
County court judge	2.00%	5.70%	0.00%	20.10%	22.50%
Elementary school teacher	70.70%	83.80%	81.20%	81.90%	82.70%
High school teacher	70.70%	46.80%	43.50%	47.70%	54.50%
Lawyer	2.60%	5.10%	15.30%	29.30%	34.70%
Mathematician	24.50%	24.50%	34.20%	40.00%	41.50%
Mining engineer	0.00%	0.90%	0.00%	0.00%	11.00%
Pharmacist	13.30%	24.70%	42.10%	55.70%	57.60%
Physician	6.80%	10.60%	17.20%	26.70%	34.30%
Physicist	3.70%	11.70%	0.00%	0.00%	21.50%
Physiotherapist	76.40%	82.70%	83.90%	82.90%	79.50%
Professionally trained librarian	81.70%	77.10%	80.70%	81.80%	81.50%
Protestant minister	1.60%	4.10%	7.40%	12.10%	19.80%
Psychologist	24.50%	48.30%	52.20%	63.50%	67.30%
Registered nurse	96.20%	96.10%	95.50%	94.90%	94.20%
Social worker	53.30%	54.80%	63.00%	72.00%	79.30%
University professor	21.20%	21.60%	26.30%	30.60%	35.90%
Veterinarian	1.70%	4.30%	17.00%	32.90%	47.70%

(1961 Dominion Bureau of Statistics and 2001 Censuses of Canada, Statistics Canada)

Appendix F: National Occupational Classification Characteristics

Profession	NOC	Skill Level	Main duties	Education
Accountant	1111	A	Plan, set up and administer accounting systems and prepare financial information for an individual, department, company or other establishment	University degree
			Examine accounting records and prepare financial statements and reports	Professional training program
			Develop and maintain cost finding, reporting and internal control procedures	Two years or 30 months of on-the-job training
			Examine financial accounts and records and prepare income tax returns from accounting records	
Airline Pilot	2271	B	Fly fixed wing aircraft or helicopters to transport passengers and freight	Completion of secondary school
			Provide services such as search and rescue, aerial surveying or spraying and crop dusting	Certified flying or aviation school
			Direct activities of aircraft crew during flight, as captain of aircraft	University degree or college diploma may be required
Architect	2151	A	Consult with clients to determine type, style and purpose of renovations or new building construction being considered	Bachelor's degree
			Conceptualize and design buildings and develop plans describing design specifications, building materials, costs and construction schedules	Three-year internship
			Prepare sketches and models for clients	Architect registration examination
Biologist	2121	A	Plan and conduct studies of the environment	Bachelor's degree

			Conduct ecological and environmental impact studies and prepare reports	Master's or doctoral degree for research scientist
			Study, identify and classify plant and animal specimens	
			Conduct experiments	
Catholic Priest	4154	A	Provide spiritual and moral guidance to members of a religious faith	College or other program in religious studies to a master's of divinity degree.
			Supervise, plan and administer programs of religious education	
			Conduct religious services	
			Administer rites of faiths such as marriages and funerals	
Chemist	2112	A	Analyze, synthesize, purify, modify and characterize chemical or biochemical compounds	Bachelor's degree
			Develop and conduct programs of analysis to ensure quality control of raw materials, chemical intermediates or final products	Master's or doctoral degree for research
			Conduct programs of sample and data collection and analysis	
			Conduct research to develop new chemical formulations and processes and devise new technical applications of industrial chemicals and compounds	
Chiropractor	3122	A	Take patient's case history, conduct examination, observe patient and perform X-rays and other tests to diagnose patient's condition	Two years of university undergraduate
			Diagnose neuromuscular-skeletal disorders	Four- or five-year program at accredited institution
			Treat health disorders in a natural manner	Examinations of Board
			Advise patients on corrective exercises, posture, lifestyle and nutrition	

Civil Engineer	2131	A	Confer with clients and other members of the engineering team and conduct research to determine project requirements Plan and design major civil projects Evaluate and recommend appropriate building and construction materials Conduct feasibility studies, economic analyses, municipal and regional traffic studies, environmental impact studies or other investigations	Bachelor's degree
Computer Programmer	2174	A	Write, modify, integrate and test software code Identify and communicate technical problems, processes and solutions Prepare reports, manuals and other documentation on the status, operation and maintenance of software	Bachelor's degree
County Court Judge	4111	A	Preside over courts of law, interpret and enforce rules of procedure and make rulings regarding the admissibility of evidence Instruct the jury on laws that are applicable Weigh and consider evidence in non-jury trials and decide legal guilt or innocence or degree of liability of the accused or defendant Pass sentence on persons convicted in criminal cases and determine damages or other appropriate remedy in civil cases	Extensive experience as a lawyer or as a professor of law
Elementary School Teacher	4142	A	Prepare courses for presentation Lead students in activities to promote their physical, mental and social development and their school readiness Prepare, administer and correct tests	

			Evaluate the progress of students and discuss results with students, parents and school officials	Bachelor's degree Provincial teaching certificate
High School Teacher	4141	A	Prepare subject material for presentation Lead students in activities to promote their physical, mental and social development and their school readiness Prepare, administer and correct tests Evaluate the progress of students and discuss results with students, parents and school officials	Bachelor's degree Provincial teaching certificate
Lawyer	4112	A	Advise clients of their legal rights and all matters related to law Research legal precedents and gather evidence Plead clients' cases before courts of law, tribunals and boards Draw up legal documents Negotiate settlements of civil disputes	Two to three years of undergraduate studies Bachelor's degree from a recognized law school Completion of the bar examination Period of articling
Mathematician	2161	A	Conduct research to extend mathematical knowledge Apply mathematical techniques to the solution of problems in scientific fields	Graduate degree
Mining Engineer	2143	A	Conduct preliminary surveys and studies of ore, mineral or coal deposits to assess the economic and environmental feasibility of potential mining operations Determine the appropriate means of safely and efficiently mining deposits Design shafts, ventilation systems, mine services, haulage systems and supporting structures Plan, organize and supervise the development of mines	Bachelor's degree
Pharmacist	3131	A	Check prescriptions for proper	Bachelor's degree

			dosage	
			Compound prescribed pharmaceutical products by calculating, measuring and mixing	Practical training under supervision
			Dispense prescribed pharmaceuticals to customers or to other health care professionals and advise them	
Psychologist	4151	A	Examine and assess behaviour, diagnose behavioural, emotional and cognitive disorders, counsel clients and provide therapy	Doctoral degree or master's degree
			Help clients manage physical illness and disorders	Examination for Professional Practice
			Plan intervention programs and conduct program evaluation	Supervised practical experience
			Apply psychological theory and principles regarding behaviour and mental processes such as learning, memory, perception and language development	
Physician	3112	A	Examine patients and take their histories	Bachelor's degree
			Prescribe and administer medications and treatments	Graduation from an approved medical school
			Perform and assist in routine surgery	Two to three years of residency training
			Inoculate and vaccinate patients	Completion of qualifying examinations
Physicist	2111	A	Design and conduct research in experimental and theoretical physics	Usually requires master's or doctoral degree
			Carry out analysis of research data and prepare research reports	
			Participate as a member of a research or development team in the design and development of experimental, industrial or medical equipment, instrumentation and procedures.	
Physiotherapist	3142	A	Assess patients' physical abilities through evaluative procedures	University degree in physiotherapy

			Establish treatment goals	Supervised practical training
			Plan and implement programs of physiotherapy	
			Evaluate effectiveness of treatment plans	
			Maintain clinical and statistical records and confer with other health care professionals	
Professionally Trained Librarian	5111	A	Recommend acquisition of books, periodicals and audio-visual, interactive media and other materials for inclusion in library collection	Master's degree in library science
			Provide reference services	
			Select, classify, catalogue and weed library materials	
			Develop systems to access library collections	
Protestant Minister	4154	A	Provide spiritual and moral guidance to members of a religious faith	College or other program in religious studies to a master's of divinity degree.
			Supervise, plan and administer programs of religious education	
			Conduct religious services	
			Administer rites of faiths such as marriages and funerals	
Registered Nurse	3152	A	Assess patients to identify appropriate nursing interventions	Completion of a university, college or other approved registered nursing program
			Collaborate with members of an interdisciplinary health team to plan, implement, co-ordinate and evaluate patient care	
			Administer medications and treatments	
			Monitor, assess, address, document and report symptoms and changes in patients' conditions	
			Assist in surgery and other medical procedures	

Social Worker	4152	A	Interview clients individually, in families, or in groups, to assess their situation and problems and determine the types of services required Provide counsel and therapy to assist clients in developing skills to deal with and resolve their social and personal problems Plan programs of assistance for clients including referral to agencies Develop or advise on social policy legislation, conduct social research and assist in community development	Bachelor's degree
University Professor	4121	A	Teach one or more university subjects to undergraduate and graduate students Prepare, administer and grade examinations, laboratory assignments and reports Conduct research in field of specialization and publish findings in scholarly journals or books Direct research programs of graduate students and advise on research matters	Doctoral degree
Veterinarian	3114	A	Diagnose diseases or abnormal conditions in animals through physical examinations or laboratory tests Treat sick or injured animals by prescribing medication, setting bones, dressing wounds or performing surgery Inoculate animals to prevent diseases Advise clients on feeding, housing, breeding, hygiene and general care of animals	Two to four years of pre-veterinary university studies Four-year university degree in veterinary medicine National certification examinations

Skill Level

A-Occupations usually require university education.

Skill Type

1-Business, Finance and Administration Occupations

B-Occupations usually require college education or apprenticeship training.

C-Occupations usually require secondary school and/or occupation-specific training.

D-On-the-job training is usually provided for occupations.

2-Natural and Applied Sciences and Related Occupations

3-Health Occupations

4-Occupations in Social Science, Education, Government Service and Religion

5-Occupations in Art, Culture, Recreation and Sport

6-Sales and Service Occupations

7-Trades, Transport and Equipment Operators and Related Occupations

8-Occupations Unique to Primary Industry

9-Occupations Unique to Processing, Manufacturing and Utilities

Appendix G: Final List of Professions

Profession
Accountant
Airline pilot
Architect
Biologist
Catholic priest
Chemist
Chiropractor
Civil engineer
Computer programmer
County court judge
Elementary school teacher
High school teacher
Lawyer
Mathematician
Mining engineer
Pharmacist
Physician
Physicist
Physiotherapist
Professionally trained librarian
Protestant minister
Psychologist
Registered nurse
Social worker
University professor
Veterinarian

Appendix H: Cognitive Interview Survey

"Here are a pile of occupations listed on cards. Please organize them in any way you wish that makes sense to you. You may have as many, or as few, piles as you wish."

Q1.

"Could you please describe what criteria you took into consideration when you organized these piles?"

Q2.

"Was there a single most important criterion? If so, what was it?"

Q3.

"Do the words 'occupational prestige' have meaning for you? If yes, what do they mean to you?"

Q4.

"Do the words 'social standing' have meaning for you? If yes, what do they mean to you?"

Appendix I: National Occupational Classification for Data and People

Data/Information			People		
0	Synthesizing	Integrating analyses of data to discover facts and/or develop knowledge, concepts and interpretations.	0	Mentoring	Dealing with individuals in terms of their total personalities in order to advise, counsel and/or guide them with regard to problems that may be resolved by legal, scientific, clinical, spiritual and/or other professional principles.
1	Co-ordinating	Determining time, place and sequence of operations or actions to be taken based on analysis of data; executing determinations and/or reporting events.	1	Negotiating	Exchanging ideas, information and opinions with others to arrive jointly at decisions, conclusions or solutions; often collaborating with others to formulate policies and programs.
2	Analyzing	Examining and evaluating data; frequently presenting alternative action in relation to the evaluation.	2	Instructing-Consulting	Teaching subject matter to others, giving advice or training others (including animals) through explanation, demonstration and supervised practice; making recommendations on the basis of subject matter expertise.
3	Compiling	Accumulating information usually recorded physically but which may be stored mentally; gathering, collating and classifying information about data, people and things; frequently reporting and/or carrying out a prescribed action in relation to the information.	3	Supervising	Determining or interpreting work procedures for a group or team of workers, assigning specific duties to them, maintaining harmonious relations and promoting efficiency.

4	Computing	Performing arithmetical operations and reporting on, and/or carrying out, prescribed action in relation to them; does not include counting.	4	Diverting	Providing entertainment in one or more forms.
5	Copying	Carrying out a set of explicit procedural/operational functions or processes based on an understanding of instructions or information necessary to perform the work.	5	Persuading	Influencing others in favour of a product, service or point of view.
6	Comparing	Identifying the obvious functional, structural or compositional characteristics (in terms of similarity with, or difference from, established standards) of data, people and things.	6	Speaking-Signaling	Talking with and/or signaling people to convey or exchange information; giving assignments and/or directions to helpers.
7	The functional digit 7 is not used in the Data column.		7	Serving-Assisting	Attending to the needs and requests of people or animals or the expressed and implicit wishes of people; helping and supporting other workers in the performance of tasks.
8	Not significant		8	Not significant	

Human Resources and Social Development Canada, CCDO/NOC, 2001

Appendix J: Education, Income, Gender, and Prestige Correlation Matrix, 1961 and 2001

Prestige, Education, Income and Gender Correlation Matrix

		Prestige score, 1965	Prestige score, 2005	Education, 1961	Education, 2001	Log income, 1961	Log income, 2001	Percent female, 1961	Percent female, 2001
Prestige score, 1965	Pearson Correlation	1.0	.5(*)	.6(**)	.5(**)	.5(*)	.6(**)	-0.4(*)	-0.4(*)
	Sig. (2-tailed)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
	N	26	26	26	26	26	26	25	25
Prestige score, 2005	Pearson Correlation		1.0	n/s	n/s	.5(**)	.6(**)	n/s	n/s
	Sig. (2-tailed)		0.0			0.0	0.0		
	N		26			26	26		
Education, 1961	Pearson Correlation			1.0	.6(**)	0.4(*)	n/s	-0.5(**)	-0.5(*)
	Sig. (2-tailed)				0.0	0.0		0.0	0.0
	N			26	26	26		25	25
Education, 2001	Pearson Correlation				1.0	n/s	n/s	n/s	n/s
	Sig. (2-tailed)								
	N				26				
Log income, 1961	Pearson Correlation					1.0	.8(**)	-0.7(**)	-0.7(**)
	Sig. (2-tailed)						0.0	0.0	0.0
	N					26	26	25	25
Log income, 2001	Pearson Correlation						1.0	-0.5(*)	-0.5(*)
	Sig. (2-tailed)							0.0	0.0
	N						26	25	25
Percent female, 1961	Pearson Correlation							1.0	0.9(**)
	Sig. (2-tailed)								0.0
	N							25	25
Percent female, 2001	Pearson Correlation								1.0
	Sig. (2-tailed)								
	N								25

*p<.05, **p<.01

Appendix K: Female-dominated Professions in 1961 and 2001

Profession	Women as a % of profession 1961	Women as a % of profession 2001
Accountant	5.10%	52.80%
Airline pilot	0.30%	5.00%
Architect	**2.20%**	**20.00%**
Biologist	16.10%	45.90%
Catholic priest	0%	0%
Chemist	7.20%	38.50%
Chiropractor	8.40%	27.70%
Civil engineer	**0.20%**	**10.70%**
Computer programmer	15.10%	**27.30%**
County court judge	2.00%	22.50%
Elementary school teacher	70.70%	82.70%
High school teacher	70.70%	54.50%
Lawyer	**2.60%**	34.70%
Mathematician	24.50%	41.50%
Mining engineer	0.00%	**11.00%**
Pharmacist	13.30%	57.60%
Physician	**6.80%**	34.30%
Physicist	3.70%	**21.50%**
Physiotherapist	76.40%	79.50%
Professionally trained librarian	81.70%	81.50%
Protestant minister	1.60%	19.80%
Psychologist	24.50%	67.30%
Registered nurse	96.20%	94.20%
Social worker	53.30%	79.30%
University professor	21.20%	35.90%
Veterinarian	**1.70%**	47.70%

Gray represents female-dominated professions
Bold represents male-dominated professions

Appendix L: Change in Proportion of Female Incumbents and Data-Complex Tasks Correlation Matrix

Prestige, Change Variables, and Rater Correlation Matrix

		2005 Prestige	1965 Prestige	Change in Income	Change in Data	Change in People	1961 to 2001, proportion female change	Both female raters	Both male raters
Pearson Correlation	2005 Prestige Scores	1.00	0.09	0.07	-0.11	0.10	0.02	0.09	-0.08
	1965 Prestige Scores	0.09	1.00	0.20	-0.12	-0.09	0.04	0.03	-0.01
	Change in income	0.07	0.20	1.00	0.17	-0.37	0.01	0.01	0.03
	Change in Data	-0.11	-0.12	0.17	1.00	0.18	0.12	0.01	-0.01
	Change in People	0.10	-0.09	-0.37	0.18	1.00	-0.49	0.00	-0.03
	1961 to 2001, proportion female change	0.02	0.04	0.01	0.12	-0.49	1.00	0.00	0.01
	Both female raters	0.09	0.03	0.01	0.01	0.00	0.00	1.00	-0.34
	Both male raters	-0.08	-0.01	0.03	-0.01	-0.03	0.01	-0.34	1.00
Sig. (1-tailed)	2005 Prestige Scores	.	0.00	0.00	0.00	0.00	0.18	0.00	0.00
	1965 Prestige Scores	0.00	.	0.00	0.00	0.00	0.03	0.07	0.29
	Change in income	0.00	0.00	.	0.00	0.00	0.33	0.24	0.05
	Change in Data	0.00	0.00	0.00	.	0.00	0.00	0.32	0.21
	Change in People	0.00	0.00	0.00	0.00	.	0.00	0.46	0.08
	1961 to 2001, proportion female change	0.18	0.03	0.33	0.00	0.00	.	0.45	0.36
	Both female raters	0.00	0.07	0.24	0.32	0.46	0.45	.	0.00
	Both male raters	0.00	0.29	0.05	0.21	0.08	0.36	0.00	.
N	2005 Prestige Scores	3003	3003	3003	3003	3003	3003	3003	3003
	1965 Prestige Scores	3003	3003	3003	3003	3003	3003	3003	3003
	Change in income	3003	3003	3003	3003	3003	3003	3003	3003
	Change in Data	3003	3003	3003	3003	3003	3003	3003	3003
	Change in People	3003	3003	3003	3003	3003	3003	3003	3003
	1961 to 2001, proportion female change	3003	3003	3003	3003	3003	3003	3003	3003
	Both female raters	3003	3003	3003	3003	3003	3003	3003	3003
	Both male raters	3003	3003	3003	3003	3003	3003	3003	3003