

Teenage Vocational Behaviour:

Do occupational aspirations matter?

A thesis presented in fulfilment of the requirements for the degree
of Doctor of Philosophy in Public Health at the University of
Otago, 2014

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Abstract

This mixed methods study investigated the relationship between young people's vocational aspirations and their adult occupations using three datasets collected at different times across a twenty year time span. Data from two studies of the same cohort of 858 longitudinal study participants (as teens, in 1986/7 and at age 32, in 2004/5) were used to compare aspirations and occupations. The results showed that less than a fifth of participants worked in the actual adult occupation that they had aspired to as a teenager, despite their overall confidence in their ability to obtain their desired occupation. However, having some type of teenage vocational aspiration was important for adult occupational outcomes: having a teenage aspiration was significantly associated with working in managerial or professional occupations as an adult. The participants in this study were more likely to have managerial jobs, trades or unskilled occupations than they had expected as teens. It was also the case that teenagers who had managerial or professional aspirations were more likely to work in these types of careers than those with other types of vocational aspirations.

The data showed a significant difference in the aspirations and occupations by gender. Nearly all the teenage boys aspired to male-dominant occupations and most of them worked in male-dominant occupations as adults. Girls were much more likely to aspire to occupations across the gendered spectrum. Nearly half of the adult women worked in female-dominant occupations. The women who had non-female dominant careers were more likely to be cognitively advantaged and come from families with higher socio-economic status. This suggests that crossing the gendered occupational boundary is particularly challenging for girls from disadvantaged backgrounds and for boys.

The third dataset was collected from 91 young people across three New Zealand sites in the early 21st century using in-depth interviews. The data from this project was analysed using three different methods to identify some of the reasons for the differences in aspirations and occupations identified in the other study. The majority of this cohort also changed their vocational plans despite the period of time between interviews being considerably shorter than that of the other cohort. The results showed that young people's vocational behaviour was influenced by chance and unplanned events such as health issues, family crises and failing to meet the pre-requisite requirements for courses. Many young people's vocational dreams were also restricted

by their limited access to economic, social and cultural resources. Many young women faced the challenge of balancing success in both traditionally male and female domains. The social, economic and political climate provides an inequitable environment in which young people have access to different levels of resources. As a result, many young people are unable to follow their vocational aspirations.

Acknowledgements

I would like to acknowledge a number of people who have contributed to the completion of this thesis. Firstly, I would like to thank the participants in the studies that make up these projects: the Dunedin Study members and their families who have given a lifetime of support to the Dunedin Multidisciplinary Health and Development Study and the 93 young people who gave their time to participate in the Transitions Project. I am grateful to the University of Otago, which funded my PhD studies via a Doctoral Scholarship. I am also very grateful to my supervisors, Professor Rob McGee and Associate Professor Karen Nairn, both of whom were supportive and enthusiastic about the project, and offered meaningful feedback and advice at appropriate times. I would also like to thank my research advisor, Associate Professor Bob Hancox for his patience and expertise with statistical advice. Thanks also to Murray Traue and Josh Kennedy for comments on earlier drafts of the thesis. I would also like to acknowledge colleagues at the Dunedin Study and particularly the Next Generation Study team who have endured working with me as I have gone through this process. Finally, I would like to thank my partner, family and friends for their support and for not asking how things are going!

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Chapter 1

Introduction

“Keep true to the dreams of thy youth.”

Friedrich von Schiller

This quote from German eighteenth century poet and philosopher, Friedrich von Schiller suggests that youth is a time of hope and expectation: a time when we might contemplate the best possible future for ourselves. While it might not be the case that everyone sees their teen years in this idealistic way, it cannot be denied that young people are often encouraged to focus on the future. As adults, perhaps we reflect less on what we had hoped for and aspired to in our youth and, as von Schiller’s quotation implies, if we do not adhere to our youthful dreams we may even forget what they were. This thesis focuses on one aspect of youthful dreams: career aspirations. In matters of education and career, young people are urged to focus on the future. “What do you want to do when you grow up?” and “what are your plans when you leave school?” are commonly asked questions of children and young people. In this thesis I investigate whether young people’s vocational dreams are likely to be realised in the future. I explore the experiences of young people’s pursuit of their vocational dreams and which young people are more likely to fulfil their career aspirations.

In order to ascertain the types of aspirations held by young people and whether they followed through with these, I used data from two projects that are part of a longitudinal study, which started with the birth of a 1,000-strong cohort in 1972. In 1986, in their second year of high school, the young people who were participants in the *Pathways to Employment Project* (which is referred to as the *Pathways Project*) were asked to record their preferred adult job. In 2004/5 the same people were asked about their current job as participants in the *Dunedin Multidisciplinary Health and Development Study* (known as the *Dunedin Study*). These two datasets make up either end of this investigation. I explore a third dataset to provide some insight into what happens between aspirations and occupations. This is the *Constructing Futures: How the children of the economic reforms articulate identities at the child/adult border* (known as the *Transitions Project*), which

was conducted from 2003 until 2006. Young people in this project were asked about their current lives and hopes for the future during their last year at school and first year out of school.

A combination of factors provided the motivation for bringing these three research projects together. I was concurrently employed as an interviewer on the *Transitions Project* and *Dunedin Study* in the early 2000s. At the same time I was also interviewing for another research project, which is a subsidiary of the *Dunedin Study*. In this project I interviewed *Dunedin Study* members who were parenting pre-schoolers. This interview protocol included questions about what participants thought their child might do for an adult career. This question often provoked bewilderment and discussion. Not infrequently it would lead Study participants to wonder whether their parents had been asked this about them and if they had ever recorded their own career aspirations in earlier phases of Study participation. These conversations then provoked my discussion with a *Dunedin Study* colleague who was aware of the *Pathways Project* and knew that the *Dunedin Study* members had, indeed, been asked about their occupational aspirations.

Around the same time I was also employed to interview the *Transitions* participants who were mulling over their future plans and I had teenage children at home who were going through the same dilemmas around their anticipated lives after school. Meanwhile, my own ‘vocational journey’ hit a judder bar as I contemplated other options after several years in the same type of work. I became interested in developing my research skills across a greater range of datasets as a way to diversify for future employment opportunities. Gradually these circumstances, thoughts and contemplations converged and the idea for this project came into existence.

Bringing together research from different eras and methodological perspectives provided an interesting challenge. I was mindful that “no intellectual work can provide a definitive answer to virtually any domain or problematic of the human sciences” (Rexhepi & Torres, 2011, p. 691) so combining a range of methods and data types provided a way to further my understanding of the topic. However, it is also important to acknowledge that all knowledge is partial and that academic work has more than a descriptive role in understanding the social world. How we describe the world also impacts on how it is understood, which may also influence how it functions, thus taking on a creative role

(Delanty, 2011). While I would not be so presumptuous to assume that this thesis would greatly influence how vocational behaviour is understood and/or potentially impact upon individuals' future behaviour, I was aware of the ethics of working with the data and how the results might be perceived. For this reason, I have employed a critical theory approach to simultaneously query the processes of the research while investigating the data. With this approach it is possible to work reflexively with data from all the projects, acknowledging the strengths and challenges from each. Critical theory requires this reflexive and practical approach as the basis for robust social criticism (Bohman, 2013).

In the rest of this chapter I outline the research questions and then provide the justification for such a study. I describe the current social context which makes understanding vocational behaviour a particularly important contemporary issue and give a brief overview of the social context at the time of the studies. Then I will define the key terms of 'vocational behaviour' and 'occupational aspirations' before providing an outline of the structure of the thesis.

Key Research Questions

This study seeks to:

- Describe the career aspirations of two cohorts of young people (from the 1980s and 2000s) situating them in the social and political context in which these aspirations occur.
- To assess whether teenagers' career aspirations (from the 1980s) are reflected in their actual jobs in their 30s (in the 2000s).
- To better understand the processes involved in teenage decision making regarding career planning.
- To examine the gendered nature of career choices in the late 20th century and early 21st century.

Rationale for Study

Work is an important facet of people's lives and can have a significant impact on the health and well-being of individuals and their families. Workers spend about one-third of their waking hours at work and do not necessarily leave the job behind when they leave the work site (Danna & Griffin, 1999). Work environments and the experiences of the individuals within them have a crucial role in the lives of those individuals. The work

environment may “promote or impair the individual’s health in a long-term perspective” (Johansson, Huang, & Lindfors, 2007, p. 686). Mental health has also been found to be negatively influenced by particular work environments: “work stress precipitates the occurrence of psychiatric disorder in previously healthy individuals” (Melchior et al., 2007, p. 1126). (Freund, 2011, p. 193). Because work is such an important part of people’s lives, investigating how young people make decisions about their future work is important for understanding career trajectories (Schoon, Ross, & Martin, 2007).

Exploring how young people make their initial career decisions provides a context for understanding education and work choices and how these impact on adult work. “There is high consensus in the literature that educational and career-related choices are of pivotal importance for future development” Teens are regularly asked about their career ambitions and young people, themselves, believe that long term developments in their lives are important (Beck, Fuller, & Unwin, 2006b).

Occupational decisions made through formative years may shape the course of career development and adult occupational attainment. Children and young people express occupational ideas from early ages as part of developmental processes and these ideas affect the direction of early career development (Hartung, Porfeli, & Vondracek, 2005; Miller & Budd, 1999; Phipps, 1995; Wahl & Blackhurst, 2000). Research suggests that having high ambitions as a teenager correlates with higher status and better paid work as an adult (Ashby & Schoon, 2010; Rowan-Kenyon, Perna, & Swan, 2011) and those with structured education and career plans at school make more strategic choices on leaving school (Reynolds, Stewart, Macdonald, & Sischo, 2006). Negotiating future occupational goals in teen years also provides experience for coping with future transitions and changes (Schoon, Ross, et al., 2007).

Educational and occupational aspirations may also have effects on other aspects of adult lives alongside career outcomes. For example, Dyhouse’s (2002) research with university graduates from the 1920s found that they overwhelmingly valued the input of education in their lives. Stewart (2003) found that young women with higher occupational aspirations were more likely to delay having their families. Individual choices may also have implications for a generation of workers. The career trajectory of each generation starts with the individual decisions of young people. Thus, individual educational and

vocational decisions have potential to change the nature of the workforce and influence the future health of an entire population by, for example, reinforcing labour force segregation (Beck, Fuller, & Unwin, 2006a) or contributing to an oversupply of particular occupations (Boven, Harland, & Grace, 2011).

Young people's occupational aspirations are not just important for what they might predict in adulthood but also in the current lives of young people. Being chronically indecisive around future careers has been linked with low self-esteem, greater fear of success and negative affect (Creed, Prideaux, & Patton, 2005). Adolescence is a particular time in life when goal setting and evaluation influence young people's developing self-concepts (Massey, Gebhardt, & Garnefski, 2008). Teenagers may have a number of competing interests, task and goals at this age and stage of life (Nurmi, Poole, & Seginer, 1995) and emerging sexuality and gender role identities create other challenges in the developing identity (Watson, Quatman, & Edler, 2002). It is also important to remember that the experience of the present impacts on the future (P. McDonald, Pini, Bailey, & Price, 2011) and perceived current opportunities and constraints for young people will impact on both their current and future vocational aspirations and decisions (Brannen & Nilsen, 2002).

Young people today face more complex and fragmented transitions to adulthood than ever before (Brannen & Nilsen, 2002; Higgins & Nairn, 2006; P. McDonald, et al., 2011). The labour market has changed radically over the last 20 years. Regulatory changes in industrialised countries have occurred against a background of increasing participation of women in the labour market, higher rates of precarious work, increasing hours of work, declining unionisation and collective bargaining (P. Williams, Pocock, & Skinner, 2008). Scholarly and popular press articles claim that one of the components of a 'fulfilling life' is work/life balance (Caproni, 1997). Modern day workers experience increased work hours and faster work pace leaving little time to keep healthy, exercise and maintain strong social and family bonds (Strazdins & Loughrey, 2007). Health and well-being are increasingly viewed as an individual responsibility, creating stress as people endure anxiety and guilt around work-life balance, physical fitness and health (Andres, 2010). The emergence of post-industrialism, and an economic shift from manufacturing to service industries along with changes in the gendered workforce means that the ordered and predicted life trajectory ceases to have relevance (Skrbis et al., 2012). This social

context means that vocational decision making is particularly important for current young people's well-being.

Some researchers have contested whether a truly 'linear' path for young people's transition from school to work ever really existed (Goodwin & O'Connor, 2005b; Vickerstaff, 2003) but the neoliberal transformation of the western world does appear to have created new challenges for young people leaving school. In the past thirty years rapid global change in social and economic processes have culminated in a "new modernity" (Andres, 2010, p. 22) which features demographic changes such as increased migration and changes in household make-up and roles. Workforce changes include technological advances, the decline of the manufacturing industries and accompanying growth in the service sector and the end of 'jobs for life'.

Young people in contemporary times must negotiate a de-standardised life-course (Brannen & Nilsen, 2002) characterised by complex and fragmented transitions which are constrained by social, economic, personal, cultural and structural resources. Part of the response to these social and economic conditions is an extended transition from school to work where tertiary education seems virtually mandatory (Alexander, Bozick, & Entwistle, 2008; Nairn, Higgins, & Ormond, 2007) and much of the cost of which is borne by the individual. The new labour market has little place for the young under-qualified worker and, in 2011, 25% of New Zealand 15 to 19 year-olds not in education were unemployed (Boven, et al., 2011). A new underclass of undereducated workers is unable to escape the part-time casual labour market (Andres, 2010) suggesting that an extended transition period between school and work may not always be a choice but more a default position due to a lack of other choices.

DuBois-Reymond (1998) describes the paradox of choice, where there is a tension between option and freedom, legitimation and coercion. Young people are faced with seemingly endless choices regarding work, leisure, education, consumerism and family. These possible opportunities may be in tension with 'traditional' understandings about age and maturity (Hockey, 2009), relationships and family (Gordon, Holland, Lahelma, & Thomson, 2005), gender (Dickerson, 2004; Strachan, 2010) and race/culture (Alexander, et al., 2008; Devadson, 2006; Nairn, Higgins, & Ormond, 2007; Yowell, 2000). An extended transition from school to work may encompass some of the traditional markers

of adulthood (such as leaving home of origin, beginning paid work or initiating sexual relationships) but alternates with behaviours and activities traditionally associated with youth (such as continued education, part-time work or extended periods devoted to leisure activities). The differentiation of youth and adulthood becomes more complex in this social climate.

This, then, is the current context in which young people are making their occupational (and other) decisions. Outlining the social, economic and historical context is crucial for understanding the potential impact of young people's aspirations. "The interplay of structural determinants and individual agency lead to particular youth trajectories or navigations" (Vickerstaff, 2003, p. 272). Throughout this thesis, I will keep returning to the topic of how the social context constrains and/or enables young people's decision making.

The Social and Political Context of the Research Studies

The previous section demonstrated that it is currently a particularly challenging time for young people's vocational decision-making. This social change occurred within a generation, which is particularly germane for this research spanning a twenty year period. The two cohorts of young people who are the focus of this project were making vocational decisions between the early 1980s and early twenty-first century. Here I give a brief outline of the social context that the research participants encountered.

The data were collected for the *Pathways Project* in 1986. This was just two years after the 1984 election of the fourth Labour Government in New Zealand. Prior to this election the most prominent feature of New Zealand's political history from 1972 was political volatility and drama after the stability of the post war boom. The 1970s and early 1980s saw massive changes in unemployment and a fiscal crisis due to unemployment and tax avoidance (Boston, Dalziel, & St John, 1999; Roper, 2005). The fourth Labour government's response was to initiate neoliberal reforms unparalleled elsewhere (Larner, 1996) and in the period from 1984 these reforms included a public service reform which included the downsizing of social services. The government also initiated the corporatisation of all state trading organisations, increased mortgage rates, decreased university funding compared to the number of students, instigated tertiary fees and the

health system was reformed (Larner, 1996). There was a major stock market crash in 1987 followed by economic decline, prompting further neoliberal responses.

The National governments of the 1990s consolidated and extended the neoliberal economic reforms. They also liberalised labour laws under the Employment Contracts Act of 1991 which decentralised wage bargaining and originated individual contracts (Murray, 2004b; Roper, 2005). Unemployment continued to rise and in 1990 the unemployment benefit was no longer available to people under 18 years of age. This resulted in disguising the full extent of unemployment and forced young people into education if they were unable to find work. Neoliberal reforms also occurred in the education system: education was conceptualised as a commodity and an investment in individuals' own and the country's future (Davies & Saltmarsh, 2007; Higgins, 2002; Murray, 2004b).

The social context was also changing. In the period when these research projects occurred, there was an increasing emphasis on women's rights. In the 1970s and 1980s the second wave of feminism took hold. Equal pay for women was legislated in 1972, the Domestic Purposes Benefit for sole parents was introduced in 1973 and in 1977 abortion was legalised in New Zealand. The New Zealand Census has recorded a steady rise in women's workforce participation since the 1950s. In 1991 60% of women aged 35-54 were employed in paid work compared to 21% of women of the same age in 1951 (Johnston, 2005). Changes in family composition, such as smaller families, more divorce and single mothers along with changes in the nature of the workplace and childcare contributed to this increase in women's workforce participation (Andres, 2010; Johnston, 2005; Tinklin, Croxford, Ducklin, & Frame, 2005). Within this social context, young women were encouraged to think beyond 'traditional' gendered paths and in 1984 the Labour Department established a *Positive Action Programme for Women*, which had the catch-phrase and vocational campaign "Girls Can Do Anything" (Murray, 2004a).

This was the economic, political and social context in which the *Pathways* participants made decisions about their futures. The aftermath of these economic reforms and social changes continued to impact on the structure of New Zealand society and twenty years later, when the *Transitions* participants decided about their futures, they inherited a similar social context. By this time, however, the neoliberal context was entrenched. As

described earlier, the early twenty-first century was characterised by deregulated and precarious employment, with high rates of unemployment, part-time and contract work. The second wave of feminism was replaced by the third wave, strongly influenced by postfeminist discourses, which simultaneously disregard gender as a source of inequality and provide high expectations of young women (Baker, 2010; Gill, 2007; McRobbie, 2007; Pomerantz, Raby, & Stefanik, 2013).

The neoliberal reforms of the 1980s had pervasive and long lasting effects. The state was reduced to having a ‘residual role’ in people’s lives (Sanders & Munford, 2008). A discourse of individualism emphasises personal responsibility and agency in relation to choices, decisions and responsibilities. “Shifting economic and social conditions of late modernity that have arguably eroded ‘traditional’ social systems are often represented as a positive source of individual choice and innovation” (Hockey, 2009, p. 229). Within a neoliberal context it is the responsibility of the individual and their family to make the best use of their resources to provide the best opportunities for a successful future. A discourse of individualism emphasises personal responsibility and agency for choices, decisions and responsibilities and the role of the State is significantly reduced. This means that disadvantages of neoliberalism include increased individual responsibility, fragmentation and anxiety and choices are available only to those with resources (Brannen & Nilsen, 2002; Gordon, et al., 2005).

These challenges are specific to the modern era, never before encountered by young people entering the workforce, although throughout history those with more resources are likely to have encountered more choices than those with fewer resources. The studies which are the focus of this project were all situated in the social context determined by these economic and social reforms. I will return to the importance of the social context when I describe the research participants’ occupational aspirations and vocational behaviour. These terms are defined below before I outline the structure of the thesis.

Definition of key terms

Investigating the topic of vocational behaviour requires clarification of terms, some of which are used interchangeably in the field of career research. Below is an overview of the terminology most often used in the vocational literature. I define and justify using the phrases ‘occupational aspirations’ and ‘vocational decision-making’, which are the key

terms used in this thesis to describe the process of young people's contemplation and decision making about their vocational futures.

The meaning of the term 'occupational aspirations' is assumed to be common knowledge. However, variations in terminology exist in the research. 'Aspirations' and 'expectations' are used in the literature interchangeably but operationalized in different ways (Ashby & Schoon, 2010). Other terms such as 'ambitions' (Croll, 2008) 'goals' (Chang, Chen, Greenberger, Dooley, & Heckhausen, 2006; Massey, et al., 2008) and 'dreams' (Phipps, 1995) are also used to encompass the same concept. There are subtle but important variations in different terms, which may influence how researchers and research participants interpret the concept of 'occupational aspirations'. In this thesis I define 'occupational aspirations' as "an individual's expressed career-related goals or choices at a point in time given ideal conditions" (Rojewski, 2004, p. 132). The two cohorts in this project were asked about their occupational aspirations in different ways and in different eras so this definition of 'occupational aspirations' is useful because of its inclusiveness and acknowledgement that occupational aspirations may change with time and in different situations. At this crucial time in their lives there are many factors influencing young people's thoughts about the future.

The terms 'vocational decision making' and 'vocational behaviour' involve more than just occupational aspirations or expectations. Educational aspirations and choices are also part of vocational behaviour. These may be intertwined with occupational aspirations and not necessarily in the order that might be assumed. Powers and Wojtkiewicz (2004) showed that girls' occupational aspirations impacted on their educational success rather than the other way round. Research centred on the goals of young people is summarised by Massey (2008) who found that the most common adolescent goals are around education and career. These are influenced by a range of individual, interpersonal and societal factors. The connection of identity and vocational decision-making has also been identified in research projects focusing on young people (Andres, 2010; Dwyer, Smith, Tyler, & Wyn, 2005; Vaughan, Roberts, & Gardiner, 2006). All of these factors are part of young people's vocational behaviour although they are given varying amounts of emphasis depending on researchers' perspectives. I use the terms 'vocational decision making' or 'vocational behaviour' rather 'vocational choice'. Like Wright (2005) I found that 'choice' does not adequately describe the degree of agency and rationality young

people experience and tends to negate the influence of external factors on decision-making. As we will see, many factors influence vocational decision-making.

Structure of the thesis

This thesis is structured in the following way:

Chapter One:

I have described the origins, research questions, rationale and context for such a study and defined key terms. The rest of the thesis has the following structure:

Chapter Two:

This chapter summarises the literature that informs this project. There is a description of the range of theoretical positions evident in the literature on career decision-making and a summary of the factors which have been found to influence young people's vocational behaviour.

Chapter Three:

The theoretical stance that underpins the research is described in Chapter Three. This includes an outline of the epistemology (constructivism), theoretical perspective (critical theory) and methodology of the study. I also justify the use of mixed methods in this chapter.

Chapter Four:

Chapter Four is the first of two methods chapters. This thesis includes three studies deploying methods from different research paradigms so the decision was made to describe the methods separately. Chapter Four describes the cohort, data collection methods and analytical measures of the *Pathways Project* and *Dunedin Study*.

Chapters Five & Six:

The *Pathways Project* results are presented in Chapter Five. In Chapter Six, the *Dunedin Study* adult occupational data is presented and compared with the *Pathways* data from Chapter Five. These two chapters are structured in a traditional way with the presentation of results, followed by a discussion and conclusion.

Chapter Seven:

This is the second of the two methods chapters and focuses on the *Transitions Project*. The cohort and methods of data collection are described followed by a justification for using this data to explore the relationship between the *Pathways* and *Dunedin Study* data. The constructivist epistemology underpinning the research acknowledges that there are

different ways of knowing, and thus, of analysing different types of data. The *Transitions* data was suited to multiple methods of analysis and two were used with the *Transitions Project*. The first is a full-cohort analysis and the second uses a case study narrative approach, combining two theoretical frameworks.

Chapters Eight and Nine:

These two chapters present the *Transitions* data, which is analysed in the two different ways described in Chapter Seven. Chapter Eight uses the theoretical metaphor of chaos theory to describe the similarities, parallels, idiosyncrasies and contradictions amongst the *Transitions* data. Chapter Nine provides a narrative analysis, focusing on five case studies. These stories are examined with the critical theories of a postfeminist sensibility and Bourdieu's theory of practice. Analysing the *Transitions* data in these ways provided some insight into the reasons for the difference between the *Pathways* and *Dunedin Study* participants' aspirations and occupations.

Chapter Ten:

The concluding chapter includes some reflections on the process and limitations of the research and outlines the key findings from the study. The thesis concludes with a discussion of the implications of the findings.

Chapter 2

Background

An extensive literature has developed over the last half century within the fields of psychology, sociology, vocational education, youth studies and health, all of which have different perspectives to offer to the understanding of vocational decision making.¹

Several different theoretical perspectives are used to explain the development, expression and potential attainment of vocational decision making which I will briefly summarise before addressing the multitude of factors that have been shown to impact on young people's career decision making. I will give particular attention to gender, which is an important issue for the current research project. I will then describe the association between aspirations and occupations as reported in the existing research before reflecting on the implications of existing research for this project.

Theoretical Perspectives

There are a number of models and theories of career decision-making.² These are historically situated. Rudd (1997) notes that theoretical perspectives reflect the era that the research is conducted in and summarises the history in decades, starting with the 1960s, which was marked by social reproductive theories. In the 1970s, as economic buoyancy declined, the focus became accommodation and resistance of socialising forces, particularly for minority groups, while in the 1980s individualistic explanations of young people's place in society became a research focus and 'locus of control' was important. In the 1990s individualisation theory with its attempts to integrate conceptions of structure and agency came to the fore to accommodate the changing social conditions (such as the changing labour market and family dynamics) that young people were negotiating. Post-modern theories also addressed these changes via discourse and analysis of power.

Wright (2005) categorises the models of decision-making into three groups using two key characteristics: the relative importance of structure and agency in individual decision-making, and the significance of rationality in the decision-making process. According to Wright (2005), models can be one of three types depending on where they sit on these

¹ For a detailed description of the literature search see appendix 1.

fundamental issues. The first is economic/instrumental rationality, which stresses agency over structure. The second is structuralist, where decisions are viewed as the result of external forces beyond the individual's control, and in the third type, 'hybrid' models aim to accommodate both external structures and individual agency. Wright (2005, p. 11) notes that "although there seems to be a consensus in favour of hybrid models, different authors are located at different places on the structure/agency continuum."

Researchers (see for example, Eccles, 2011; Massey, et al., 2008) working from a psychological perspective more often emphasise agency over structure, tending to pay more attention to particular psychological characteristics and individual factors, which might combine to make a psychological construct, which can then be measured for impact on career aspirations. These include such things as self-concept theory (Phillips & Imhoff, 1997), possible selves theory (Chalk, Meara, Day, & Davis, 2005; Perry, Przybysz, & Al-Sheikh, 2009; Yowell, 2000) and goal attainment theory (Nurmi, Salmela-Aro, & Koivisto, 2002). All these theories investigate the importance of various individual characteristics, emotions and beliefs on the process of transition from school to work. Psychological constructs tend to be developmental. Vocational behaviour is viewed as starting in a naïve or undeveloped form, becoming advanced as individuals move towards the goal of distinct, realistic and mature career ambitions or outcomes. The focus is on how goals (or aspirations) are motivational forces guiding current behaviour (Massey, et al., 2008) and establishing a match between individual abilities and interests with vocational opportunities, known as 'trait-factor' approaches (Amundson, Mills, & Smith, 2014; Peake & McDowall, 2012).

Some psychological models also incorporate external factors into their theory of career aspiration development (Rojewski, 2004). Examples are social cognitive career theory (SCCT) which incorporates self-efficacy, outcome expectations and personal goals with contextual factors (Patton & Creed, 2007; Rowan-Kenyon, et al., 2011) and status attainment theory (Marjoribanks, 2002; Sewell, Haller, & Portes, 1969) which acknowledges the impact of social forces in occupational attainment. Terminology can vary within these models, for example SCCT is sometimes called 'social cognitive theory' (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001) while goal pursuit (B. Greene & Debacker, 2004) and goal appraisal (Nurmi, et al., 2002) are both reflective of future time orientation perspectives. Yet other researchers investigate the aspirations of

young people by combining and/or comparing theoretical perspectives (Howard & Walsh, 2011; Mau & Bikos, 2000; Schoon & Parsons, 2002; Sinclair, Carlsson, & Björklund, 2014).

The purpose of these theories is to clarify how different characteristics influence young people's career decisions. Clarification is not always the result, however. The literature about young people's vocational behaviour can be overwhelming due to the wide ranging assortment of various disciplinary and historical perspectives, terminology and methodologies. Results are often inconsistent or contradictory due to varying methodologies and theoretical positions (Mau & Bikos, 2000) and some explanatory models and theories do not adapt well to particular groups of people, such as women (Danziger, 1983; Hollinger & Fleming, 1992) and people from ethnic minority groups (Chang, et al., 2006). Cohen, Dubberley and Mallon (2004) suggest that the prevalence of positivist research approaches with their tendency to fragmentation and reductionism also contribute to the lack of clarity in career development research. Despite their shortcomings, it is important to acknowledge different theoretical perspectives because they contribute to what we currently know about young people's career decision making, and they have helped form and inform social conceptions about vocational behaviour.

As the brief summary of vocational theories above shows, the diversity of the approaches to the topic of young people's aspirations reflects the complexity of the topic and the importance of social and historical context. Andres and Wyn (2010) advise that conceptual frameworks can be useful tools, providing that they allow for complexity, structural processes and analysis of change and continuity. They suggest that using concepts from different theoretical perspectives may offer more understanding. Similarly, Rojewski (2004, p. 139) argues that, "While each theory offers certain advantages, no theory is comprehensive enough to address all issues. Therefore, a collective perspective may provide the best way to understand all the complexity represented by occupational aspirations."

Understanding prior research from a range of perspectives and methodologies is important for this current research project for a range of reasons. I draw on data from longitudinal projects, each of which was designed and administered in a historical and social context. The datasets have differing methodologies and methods of data collection,

which impacts on analysis. And, the theoretical approach underpinning this project falls within Wright's (2005) 'hybrid' category of theories, incorporating young people's agency to act within the constraints of social inequalities.³ Career decisions are "influenced by a range of factors, and the importance of these factors varies between individuals, and over time and place" (Wright, 2005, p. 3). Thus, it was important to review research results from a range of perspectives with different degrees of prominence given to structural and/or individual characteristics in the different projects. Below I summarise structural influences (gender, social class and ethnicity) on young people's vocational decision-making. These have been identified across the literature from different disciplines. A range of personal and family factors that influence vocational behaviour are then described. Separating the 'levels' of influences into structural and individual allows research findings from different disciplines and theoretical perspectives to be incorporated into the summary of influences on vocational behaviour. However, I acknowledge that individual and familial factors are both influenced by and part of the structural features first described.

Factors that influence vocational behaviour

To summarise the extensive literature on vocational behaviour, firstly I review the impact of structural factors. Massey (2008, p. 449) in their review of adolescent goal research note that the "impact of the socio-political context has scarcely been investigated". However, research with young people from different countries (for example DuBois-Reymond, 1998 from the Netherlands; McLeod & Yates, 1998 from Australia; Furlong et al, 1996 from Scotland) and cultural and socio-economic groups shows that socio-political contexts vary between and within countries and provide different demands, challenges and institutional tracks for young people. Historical comparisons (Goodwin & O'Connor, 2005b; Gordon, et al., 2005; O'Connor & Goodwin, 2004) also show that the socio-political context is crucial in explaining the systems and structures within which young people make career decisions. Career decision making is influenced by a range of factors, including economic and historic events over which young people have no control.

Structural features remain important influences on the process of vocational decision making even within this era of 'individualisation'. It may be that they have a greater

³ See Chapter 3 for a full discussion of the theoretical position and mixed methods approach guiding the research and Chapters 4 and 7 for descriptions of the methods of the two studies.

impact because the myth of choice masks the social stratification and structures which enable some and restrain others. “The development of occupational aspirations and expectations can be explained by some combination of background variables, psychological factors and sociological or environmental influences” (Rojewski, 2004, p. 142).

Gender

“Research over a more than 30-year span has consistently shown gender differences in occupational aspirations” (Rojewski, 2004, p. 142) and occupations remain highly gendered. Historically women have had lower levels of education and income than men and ‘traditional’ roles in families and workplaces have prevailed (Fels, 2004). There is some suggestion that these patterns are changing. Women have increased workforce participation and rates of tertiary education and changing attitudes around household responsibilities have been identified (Galinsky, Aumann, & Bond, 2011). Rising divorce rates, increasing numbers of single parents, and the collapse of the youth labour market in the 1980s have all contributed to a changing gendered labour market (Tinklin, et al., 2005). In the 1980s education programmes encouraged women to expand their occupational horizons (Murray, 2004a). Young women now have access to, are encouraged into and are aspiring to a greater range of occupations than in previous generations (Francis, 2002; Furlong & Biggart, 1999; Pringle et al., 2010). They take a less restricted curriculum at school (Francis, 2000; Tinklin, et al., 2005) and increasingly aspire to higher status occupations (Mello, 2008; Schoon, Martin, & Ross, 2007).

However, research indicates that most young people still aspire to traditionally gendered jobs and most adults work in occupations predominantly performed by people of their gender (Croll, 2008; Hartung, et al., 2005; Patton & Creed, 2007). While both boys and girls are less likely to see particular occupations as being gender-appropriate and most believe that either men or women can do most jobs, most young people do not intend to cross traditional gender lines in their own career decisions (Beck, et al., 2006a, 2006b; Howard et al., 2011; McMahon & Patton, 1997; Miller & Budd, 1999). This is particularly true for boys (Wahl & Blackhurst, 2000). In addition, the participants in Miller and Hayward’s (2006) study believed that, while either gender *could* perform any job, in reality most jobs *are* segregated by gender. Women continue to be employed

primarily in the caring and service industries and are underrepresented in managerial roles (Strachan, 2010) while men dominate the fields of technology, science and managerial positions (Powers & Wojtkiewicz, 2004; Schoon, Martin, et al., 2007). ‘Men’s jobs’ have higher status and salaries so it is easy to see why more women might aspire to traditionally male jobs but fewer men to ‘women’s work’ (Howard, et al., 2011). Other reasons for not wanting to transverse the traditional occupational gender line include lack of interest, potential discrimination in the workplace and, for males, the potential for having their sexuality questioned (Beck, et al., 2006b).

While more women than men now have university degrees, more men obtain professional and graduate degrees (Powers & Wojtkiewicz, 2004) and women’s increased qualifications and aspirations do not equate to jobs with equal pay or status to those of men (Ashby & Schoon, 2010; Yowell, 2000). Young women appear to have placed the emphasis on obtaining qualifications (McMahon & Patton, 1997) while men continue to focus on career goals (B. Greene & Debacker, 2004). In a study investigating the difference between young people’s occupational aspirations and attainments (Rindfuss, Cooksey, & Sutterlin, 1999), young women’s attainments were often below those of their aspirations while men were more likely to have moved up the occupational ladder. However, it can be difficult to measure the occupational attainment of women because of the lower status of the careers that they tend to go into (Hollinger & Fleming, 1992) and because careers that are traditionally ‘women’s work’ command lower salaries for similar levels of education (Howard et al, 2011).

Gordon et al (2005) note that women’s increasing equality has occurred only within education and the law, but the reality is that women have raised expectations but poorer outcomes. Several reasons for this have been identified in the literature. Young women have many goals that they are balancing when they make occupational decisions, one of which is their future family and parenting responsibilities (Brannen & Nilsen, 2002; Du Bois-Reymond, Guit, Peters, Ravesloot, & Van Rooijen, 1994; Watson, et al., 2002). This does not appear to impact upon young men to the same extent (P. McDonald, et al., 2011; Tinklin, et al., 2005). Research also suggests that young women require more career knowledge than boys require before making career decisions and are more interested in careers of which they have more knowledge (Creed, et al., 2005). Girls also know less about ‘male’ jobs (Miller & Budd, 1999; O’Connor & Goodwin, 2004) and

some are comparatively underprepared in pre requisite areas of mathematics and science for science and technology careers (Ceci & Williams, 2011; Chow & Salmela-Aro, 2011; Schoon, 2001).

Young women are also aware of the barriers that they may face in making an unorthodox career decision (Beck, et al., 2006b; Mello, 2008). They are influenced by the gendered behaviour that they see around them where women do more of the unpaid work in the home (Sanders & Munford, 2008). While men generally earn more, women are more likely to take responsibility for childcare (Tinklin, et al., 2005). Girls are required to reconcile the traditional requirements of what they know about being a woman, which may require them to be altruistic mothers, carers and focused on relationships (Dæhlen, 2007; Hockey, 2009; Ridgeway & Correll, 2004) with a discourse of individualism, where they are required to provide for themselves and strive to achieve. “Girls have a heightened sense of ambition, energy and optimism relative to the public world, and while this is important it can generate tensions because girls are juggling these desires with their emotional investment in personal intimacies and relations of caring and concern for others” (McLeod & Yates, 1998, p. 33).

While gender is a factor that may impact on young people’s career aspirations and attainments, it does not have the same level of influence for all. Young women from ethnic minority groups and working class backgrounds face increased challenges (McLeod, 2007; Shu, 1998; Wright, 2005). There may also be particular pressures on middle class young women who are expected to succeed in all areas of their lives (Gordon, et al., 2005; Harris, 2004; Hollinger & Fleming, 1992). As Francis et al (2003, p. 438) acknowledge “for some girls the achievement of their aspirations is less probable and more difficult than for others.” This suggests that social class intersects with gender as an influence on vocational behaviour.

Social Class

Social class continues to play a significant part in shaping young people’s biographies through intergenerational reproduction of beliefs and cultural capital as well as via transfers of wealth (Jones, O’Sullivan, & Rouse, 2004). The impact of class on vocational decision making is not straightforward and it is often assumed to be less

significant in late modernity because of reduced commitment to collective identities (Andres, 2010). However, some researchers (Kincheloe & McLaren, 2011; C. L. Williams, 2013) suggest that we should not underestimate the impact of social class on inequality and oppression in a globalised, privatised world. They state that the current research focus on social status rather than social class obscures capitalist exploitation and provides a context for continued domination of the working classes. Williams (2013) argues that class inequality has exploded under neoliberal economic systems where unskilled workers experience low pay, poor conditions and no job security.

There is ample research to suggest that social class is still a source of disadvantage and the attainments of young people from working class backgrounds continue to lag behind those of their middle class peers. Hanson (1994) found that young North American people from lower socio-economic (SES) groups were more than twice as likely as those from higher SES groups to have educational expectations that fell short of their aspirations. Devadson's (2006) research found that European young people from disadvantaged backgrounds face extra challenges but the adversity faced by individuals can obscure the social structures they are operating within. A study of North American disadvantaged urban youth found that just under half of the study participants planned to attend college on leaving school compared to 95% of the general population (Alexander, et al., 2008). Generally those from middle class backgrounds aspire to and obtain middle class work while those from working class backgrounds with similar aspirations face more challenges and find themselves working in lower status jobs (Croll, 2008). The disadvantage borne from having a working class background is compounded as young people are channelled into different academic paths via school subjects and vocational pathways (Wright, 2005), attend differently resourced schools (Rowan-Kenyon, et al., 2011), have less knowledge about the qualifications required for particular careers (Phipps, 1995), and have differential access to social and occupational networks (Merino, 2007; Staff & Mortimer, 2008).

Some authors suggest that it is the disparity in the education received by individuals of different socio-economic classes that is the source of occupational inequity and that gaining further education overcomes disadvantage (Croll, 2008; McClelland, 1990). However, gaining access to further education remains a challenge for those from working class background. Social class and inequitable access to resources impacts on how

students from working class backgrounds experience tertiary education, often finding it difficult to reconcile their background with a new social setting (Friedman, 2013; Lehmann, 2014; Reay, Crozier, & Clayton, 2009; Reay, Davies, David, & Ball, 2001). Strathdee (2005) shows that, even with an education from an elite institution, those without middle class cultural capital remain disadvantaged in the workplace.

Ethnicity/Culture

Ethnicity is the final structural feature impacting upon vocational behaviour addressed before the summary of other influences. The effects of ethnicity on occupational aspirations and attainments are not clearly understood because participants from ethnic minorities are usually under-represented in longitudinal surveys (Wright, 2005). It is also difficult to assess the impact of ethnicity due to the entanglement of cultural factors with other variables, particularly socio-economic status (Hartung, et al., 2005; Howard, et al., 2011; Shu, 1998). Reay et al's (2001, p871) research investigating the impact of class and ethnicity on higher education choices in the UK concluded that "Class tendencies are compounded by 'race'. Just as most working-class students end up in less prestigious institutions so do most young people from minority ethnic groups."

Historically there have been ethnic differences in educational achievement and attainment although these gaps have narrowed in the last three decades for some minority groups (Kao & Thompson, 2003). Wahl and Blackhurst (2000) reviewed the body of research on the educational aspirations and outcomes of minority groups and concluded that these groups varied in their aspirations compared to each other and majority groups. The participation and success of Maori and Pasifika students in New Zealand is increasing but continues to remain behind that of European and Asian students (Ministry of Education, 2009; Ministry of Health, 2010). The relationship between cultural minority groups and educational institutions may be complex. Families from minority cultural groups often hold high aspirations for their young people, which are inherited by the students (Nash, 2000). However, the skills valued in the education system are often not echoed in the social and cultural lives of minority students. As Nash (2000, p80) says, in his discussion about Pacific families in New Zealand, "[M]any Pacific families lack the specific forms of cultural capital required to use the school successfully."

Research focused on the experiences of minority students (Basit, 1996; Mau & Bikos, 2000; Nairn, Higgins, & Ormond, 2007; Yowell, 2000) shows that assumptions and expectations about ethnicity and culture impact on young people's vocational decisions. Ethnicity and culture can influence the types of aspirations young people hold and they require these to be in concordance with their cultural selves (Kao, 2000). Students from minority cultural groups may be particularly influenced by some of the other influences described later in this section, such as parental expectations and support, lack of information about educational institutions and peer influence. A review of literature on future orientation and motivation (B. Greene & Debacker, 2004, p. 115) concluded "There is also evidence that people's future orientations reflect the roles and responsibilities defined for them by their culture."

The impact of structural inequalities on vocational behaviour

Differential access to knowledge, information and institutions occurs as a result of structural inequalities in the form of gender, class and ethnicity often compounding advantage and disadvantage. Knowledge about the labour market and pre-requisite qualifications for jobs has been shown to have an impact on young people's career aspirations (Howard, et al., 2011; Miller & Hayward, 2006). This includes an awareness of the local job market and the opportunities currently available (Furlong, Biggart, & Cartmel, 1996). Research shows that many young people have poor knowledge about the labour market (Beck, et al., 2006a; Francis, 2002; Wahl & Blackhurst, 2000) and what employers require (Murray, 2004a; Rindfuss, et al., 1999). Some young people are increasingly informed about careers via television programmes and other media (Francis, et al., 2003; Miller & Hayward, 2006; Pringle, et al., 2010), which may limit access to information for some. Individuals operate within the confines of the structural factors of gender, class and culture. It is important to acknowledge the agency of individuals within societal constraints, however. Below I identify the familial, school, peer and individual factors that have been shown to impact on young people's vocational behaviour.

Family and Peer Influences

Parental expectations are powerful predictors for young people's career aspirations and decision making (Ashby & Schoon, 2010; Bandura, et al., 2001; Mau & Bikos, 2000).

Other family of origin variables such as maternal education (Schoon, Ross, et al., 2007), maternal employment (Bogenschneider & Steinberg, 1994), family size (Raffe, Brannen, & Croxford, 2001), parental career and unemployment (Wahl & Blackhurst, 2000) have also been shown to influence young people's vocational behaviour. Family members may also be a source of information and advice about careers (Goodwin & O'Connor, 2005a). Establishing one's own family may also influence career options, especially for young women (Schoon, Martin, et al., 2007; Stewart, 2003). While aspects of family may well influence young people's vocational aspirations and choices, it is difficult to extricate family and social class influences (Wright, 2005).

Schools also play an important role in providing vocational information but considerable variation exists in schools in the amount of career guidance and emphasis given to careers advice (Boven, et al., 2011; Vaughan, et al., 2006). Research has found that some high school students received little knowledge about post-secondary education and careers (Francis, 2002; Wright, 2005) and as tertiary education becomes virtually mandatory, careers guidance becomes increasingly delayed beyond high school (Rowan-Kenyon, et al., 2011).

Research has investigated the significance of the type of school (private, public, single sex and co-educational) young people attend on young people's aspirations (Carroll, 2002; Francis, et al., 2003; Pringle, et al., 2010; Smyth & Strathdee, 2010; Watson, et al., 2002). This research is complicated by confounding factors, such as SES and peer influences. As a result, evidence about the impact of school type on aspirations is inconclusive (Mael, 1998). Others have suggested that specific features of school such as subject choice (Francis, 2000; Schoon, Ross, et al., 2007) or type of school programme (Mau & Bikos, 2000; Raffe, et al., 2001) are predictors of higher career aspirations.

Peers can also have an important part to play in young people's vocational behaviour. While it is unlikely that young people take a particular path because their friends choose it, peers do seem to influence decision-making about post-secondary education and training, particularly same-sex friends (Hemsley-Brown, 1999; Sinclair, et al., 2014). Peers can also have negative influences on vocational decision making via encouraging experimentation with anti-social behaviour (P. Cohen & Cohen, 1996; Wright, 2005).

Individual Factors

A number of studies assert that academic attainment is an important influence on young people's aspirations (Creed, Patton, & Hood, 2010; Croll, 2008; Goodwin & O'Connor, 2005a). Raffe (2001) suggests that the best predictor of level of occupation is school qualifications. This connection is not straightforward, however. While some research has suggested that acquiring qualifications can compensate for other disadvantages (Alexander, et al., 2008; McClelland, 1990), others argue that it is more difficult for those from working class families to obtain qualifications and even if they do, they face disadvantage in the workplace (McLeod, 2007; Strathdee, 2005). As already noted, gender may impact on whether or not qualifications equate to more choices in the workplace: Ashby and Schoon (2010) found that the relationship between educational performance at age 16 and adult careers was stronger for males. It is possible that qualifications have less impact on young people's career decision making in the current context: Choi (2005) found that some young people thought that qualifications were less important than personality or talent within the current context of neoliberal discourses and consumerism.

Other research suggests that it is not academic performance or aptitude per se which impacts on aspirations but rather the individual's perceptions of and confidence in their abilities (Furlong & Biggart, 1999; Nurmi, et al., 2002; Schoon, 2001). Some research focuses on the related psychological constructs of self-efficacy (Bandura, et al., 2001), perceived control or instrumentality (Chang, et al., 2006; B. Greene & Debacker, 2004) and locus of control (Mau & Bikos, 2000; Yowell, 2000). These studies suggest that perceptions of academic attainment (as distinct from actual attainment) may have a significant impact on young people's aspirations and may influence such things as subject choices, which then impact on future aspirations and outcomes (Wright, 2005). Other research, also from a psychological perspective, suggests particular personality types are more likely to have specific career aspirations as teens, which can impact on their adult outcomes (Bacanli, 2006; Hirschi, 2011; Wheelahan & Knowles, 1993). Psychological factors such as psychological well-being and mental health (Creed, et al., 2005; Massey, et al., 2008) and positive emotion and hope (McLeod, 2007; Nurmi, et al., 2002) have also been shown to influence how young people form aspirations and the potential for achieving them.

Another individual factor given attention in the literature is young people's ability to reconcile their perceptions of themselves with a potential career path (Choi, 2005; Du Bois-Reymond, et al., 1994). As noted in the section on gender, for young women this may mean reconciling their understanding of what it means to be a woman and/or mother and/or worker (Phillips & Imhoff, 1997). For some teens it may involve their understanding about what it means to be a young person and how they relate this to the adult world of work when neoliberal youth is portrayed as fun-loving and fancy-free (Gordon, et al., 2005; Hockey, 2009). It may also involve reconciling one's interests or personality features (such as an interest in sports, science or a view of oneself as a caring person) with a future career (Dæhlen, 2007; Schoon, Martin, et al., 2007).

Young people's responsibilities and pastimes prior to leaving school may play a part in their vocational decision-making. After-school and holiday work (Creed, et al., 2005; Hamilton & Powers, 1990; Staff & Mortimer, 2008), and club and organisation membership (Merino, 2007) can influence the skills and networks developed and knowledge that young people have about future careers. Access to these potential advantages is, of course, influenced by familial and individual resources.

This overview of the research suggests a combination of interconnected factors which may influence how teens form career aspirations and whether they are able to attain these. What is not clear from this literature is exactly how these factors combine to constrain or facilitate aspirations and whether some factors have more influence than others on the likelihood of attaining career goals. This is an important question to ponder for this current project where I investigate the adult outcomes of young people's aspirations. Below I summarise research focusing on the predictability potential of vocational aspirations and the methods used to investigate this.

The relationship of aspirations and career outcomes

The literature investigating the predictive ability of young people's career aspirations is not consistent. Several authors claim that the *level* of aspirations are good predictors of the *level* of occupational attainment (for example, Mau & Bikos, 2000; Mello, 2008; Schoon & Parsons, 2002; Schoon & Polek, 2011). Theoretical work providing models of understanding and cognitive variables increasing the likelihood of the predictive

capability of aspirations suggest that aspirations and outcomes are linked (Gottfredson, 2002; Silvia, 2001) but research suggests this link is only for only some groups. Mello (2008) found the relationship of aspirations and outcomes varied by gender. In other studies the connection was limited to those with higher aspirations (Howard, et al., 2011; Rindfuss, et al., 1999). Some research found that young people's aspirations were higher than their attainments and are generally unrealistic or later constrained (Goodwin & O'Connor, 2005a; S. L. Hanson, 1994; Hollinger & Fleming, 1992; Reynolds, et al., 2006).

It is rare to find research articles which conclude that specific occupational aspirations are predictive of career attainments with the exception of Trice and McClellan (1993) who found a 'strong concordance' rate between aspirations and occupations. However, this study uses a relatively small high ability sample from 1926 and had considerable variation for age and gender. Most studies are less confident in their claims for the predictive powers of career aspirations, with some suggesting that aspirations are predictive of adult attainments but only for a proportion of participants (Croll, 2008; Patton & Creed, 2007; Wheelahan & Knowles, 1993).

There are several reasons for these varied and inconclusive results regarding the correspondence of occupational aspirations and attainment. Firstly, studies varied in methods and methodology. Some use methods to ascertain participants' commitment to career aspirations, with the assumption that greater commitment equates to more likelihood of following a career path. Watson et al (2002) asked young people to provide a realistic *and* an ideal job choice to determine whether there is a gap while others used 'possible selves theory' to ascertain differences between hoped for and expected selves (Chalk, et al., 2005; Kao, 2000; Yowell, 2000). Evidence suggests that more long-term and stable aspirations are more realistic and likely to be fulfilled (Rojewski, 2004; Watson, et al., 2002). Maintaining similar aspirations over a period of time shows maturity of career decision making (Creed, et al., 2005) and increases the likelihood of aspirations being fulfilled (Nurmi, et al., 2002). However, consistency of aspirations is not necessarily an effective way of evaluating the likelihood of fulfilling aspirations because it is based on a potentially false assumption that stable aspirations are more realistic. As a result, the research around consistency of aspirations is inconclusive (Furlong & Biggart, 1999; Rindfuss et al, 1999; Wright, 2005).

Many studies focusing on young people's career aspirations are cross-sectional, so cannot evaluate the long term implications or capture the process of decision-making over time. Other studies are retrospective (for example, Leung, Conoley, & Scheel, 1994).

However, retrospective studies require participants to remember what they thought about potential careers, which can be ad hoc and is likely to be confounded by their current occupation and views. Longitudinal studies offer the most insight into the relationship between aspirations and attainments (Creed, et al., 2010; Rowan-Kenyon, et al., 2011; Wheelahan & Knowles, 1993). However, even these have limitations. They vary in the length of time that they are able to follow participants with some having a short time frame (for example, Mau & Bikos, 2000; Noeth & Jepsen, 1981). This has implications for what can be concluded about long term impact, especially in the current era where it is rare to have a 'job for life'.

It is suggested that timing of career decision making can be a factor in the potential to meet aspirations (Chang, et al., 2006). However, there is some debate about whether career aspirations become more realistic with age (Kerckhoff, 1977; Phipps, 1995; Wahl & Blackhurst, 2000). It is also important to remember that no matter what vocational decisions young people have made or not made, research participants may not have the same investment in the topic as the researcher: McLeod and Yates (1998) found that many teens disliked being asked about their future jobs. Some said that they did not have clear vocational goals and they were not happy to be quizzed about it. Results can also differ according to *how* research participants are asked about their aspirations. Slightly different questions may obtain different answers reflecting the differences between aspirations, expectations, dreams, hopes and goals described in the discussion of terminology in the introduction. All of these research decisions may influence how vocational behaviour is interpreted.

Another issue in understanding the potential link between teen career aspirations and adult occupational outcomes is that of measurement. To make sense of data, researchers commonly categorise both aspirations and careers. This is generally done hierarchically, rating teen aspirations on a continuum from low to high status. These are compared to adult occupations which are often categorised according to standardised occupational classifications. This incurs the problems common to classification – that of deciding

criteria for inclusion into each category and potentially blurring the distinctions between specific occupations by condensing them into categories. It can also be that heterogeneity within the categories makes it difficult to rank-order them (Rindfuss, et al., 1999).

Hierarchical differentiation of aspirations and occupations is a somewhat arbitrary process, determined by level of education, income and status, all of which tend to favour careers traditionally undertaken by white middle class males in the Western world.

Inherent in hierarchical measuring of occupations and aspirations is an assumption that being higher on the scale is better. Also, research focusing on goals (rather than career aspirations) has shown that young people have a range of goals and aspirations across various dimensions like education, family, money, health, relationships and self-fulfilment (Carroll, 2002; Chang, et al., 2006; Hollinger & Fleming, 1992; Massey, et al., 2008). Assuming that a higher status occupation is intrinsically good ignores these other factors influencing young people's aspirations.

Schoon et al (2001) focused on particular careers which may avoid some of the problems with hierarchical categorisation noted above. However, while this approach provides more specific variables and comparisons it does not negate the need for categorisation. In following the career trajectory of a cohort hoping to become scientists, health professionals or engineers, specific occupations required classification into those categories, leaving the researchers to decide if, for example, laboratory technicians or viticulturists were included as scientists (Schoon, 2001). Such an approach may also provide greater challenges when working with rarer occupations and aspirations.

Thus, research using a variety of methods and perspectives provides an inconclusive picture about the relationship between vocational aspirations and occupations. It does appear that there is a relationship between the level of aspiration and occupation but understanding this correlation is inhibited by the requirement to categorise aspirations hierarchically. This process involves judgements and exclusions which may reinforce existing understandings and/or prejudices.

Conclusion

This chapter has considered a broad range of literature relating to young people's vocational decision-making. There are a range of theoretical perspectives which provide frameworks for understanding the processes that young people undergo in the school to

work transition. These vary in the degree of prominence they place on individual agency and/or external structural processes, often reflecting the research discipline and historical context. Research from more sociological perspectives tend to emphasise structural influences such as gender, SES and culture while psychological research tends to focus on the individual and relationships. All have been shown to impact on vocational behaviour in various ways. This is part of the background to understanding the relationship between teenage aspirations and adult occupations. It seems that there are a range of factors that may enhance or confound the potential for young people to attain their aspirations and mixed evidence about the predictive potential of vocational aspirations. The range of methods and methodologies reflects the complexity of the topic and contributed to the inconclusive results.

Acknowledging the variation and shortcomings in the previous research is informative for the current project which has some inherent challenges because the data was collected in different historical periods, in different settings and ways drawing on different methodological and ideological perspectives. However, these features are also strengths of the study. Several authors complain of a lack of longitudinal research to scrutinise the influences on aspirations and their relationship with attainments (Creed, et al., 2010; McMahon & Patton, 1997; Mello, 2008; Wright, 2005). For example, Schoon (2001, p. 125) writes that " For a better comprehension of vocational behaviour we have to realise that there are multiple factors influencing that behaviour at different time points and that isolated correlational studies will not contribute to a better understanding." The current project offers not just the longitudinal analysis of this process but also the insight obtained from an in-depth exploration into the processes that young people undergo as they make the transition out of compulsory schooling.

Chapter 3

Methodology

In this chapter I firstly outline the epistemological foundation of the research. The justification for the use of particular research methodologies and methods lies in the assumptions about reality that are brought to research. For this reason I will firstly describe how I define and interpret ‘knowledge’ before describing the methodology that I used in this project, with the goal of adding to that pool of knowledge. Below I describe the constructivist epistemology underpinning the research before describing critical theory, which is the overriding theoretical perspective of this thesis. The philosophical stance and theoretical perspective in turn inform the mixed methods approach to the study.⁴

Epistemological Stance: Constructivism

An ontological and epistemological position influences how research questions are asked and answered. The methodological and theoretical perspective of this thesis is grounded in constructivism. “The choice of social science research questions and methods is a reflection of researchers’ epistemological understanding of the world, even if it is not articulated or made explicit.” (Feilzer, 2010, p. 7). Constructivism is a position that acknowledges that there are different ways of knowing: “In the social sciences there is only interpretation. Nothing speaks for itself” (Denzin, 1994, p. 500). The constructivist paradigm is based on an ontology which allows for multiple realities which are socially constructed. Meaning is constructed when consciousness engages with the world and the objects within it (Crotty, 1998).⁵

Constructivism is a theory of knowing, not being; the goal is to describe *how* we know things not to describe characteristics of the world (von Glaserfeld, 2001).

Constructivism is a relativist position where each individual brings different past experiences, cultural understandings and personality traits to any encounter they have

⁴ Each of the different research projects that make up the study used methods from different research paradigms so the specific methods for each of the projects are described in Chapters Four and Seven.

⁵ Crotty distinguishes between constructivism (individual meaning making) and constructionism (collective generation and meaning making) and prefers the term ‘constructionism’ because he suggests that it emphasises the hold culture has on us. However, he acknowledges that the terms are often conflated. I use the term ‘constructivism’ here because it is the more widely used term in the philosophical literature but agree with Crotty that it is crucial to acknowledge that meaning making occurs in a cultural context.

with the world. Individuals come to understand the world via these encounters (Piaget, cited in Bodner, 1986) meaning that each individual has their own separate ‘reality’.

Constructivism from this perspective is a social theory, acknowledging that the influences on individual constructions of ‘reality’ take place in a social world and are derived from social relationships (Young & Collin, 2004). Riegler (2001) promotes a version of constructivism called ‘radical constructivism’, which claims that it is impossible for us to transcend our experiences. We cannot know things beyond our experience of them.

There are some well-known criticisms of constructivism, which I will briefly address. A constructivist understanding of the world has been denigrated by realists for being solipsistic (Riegler, 2001). They assert that the constructivist claim that there is no ‘real’ world with which they can compare their experiences or theories leaves constructivists in a position of tautology. With no external point of reference how can constructivists know what is true and real and how can they make valid and reliable claims about the world? However, by drawing on two schools of constructivist thinking it is possible to refute these claims, or at least cast serious doubt upon them.

Firstly, from the radical constructivist position, it is irrelevant whether an objective world *actually* exists because we cannot know it beyond our experience of it. As already noted, radical constructivism is a theory of knowing, not being (Maturana, 1970; Riegler, 2001; von Glaserfeld, 2001). The logical conclusion is that criteria other than an appeal to the ‘real’ world are required for assessing knowledge. For the radical constructivist these are instrumental: knowledge claims should be consistent with what we already know of the world, coherent and allow us to make useful predictions (Riegler, 2001). Kuhn (1977) applied this instrumental criteria to scientific theories and suggested that the five characteristics of a ‘good’ scientific theory were that it should be accurate empirically, consistent (internally and with other theories), have a broad scope, be simple (in that it brings order to chaos) and fruitful, disclosing new phenomena. He acknowledged that these criteria could be interpreted differently by individuals depending on background, personality and perspective and that, in practice, these criteria might be imprecise. Consequently Kuhn (1977) suggested that the criteria function as *values* to influence theory choice not as objective *rules* to determine theory choice.

Another refutation of the claim of constructivists' solipsism is described by Crotty (1998). This is perhaps a more generally accepted constructivist view than the radical constructivists' observation that the existence or non-existence of a 'real' world is irrelevant. Other constructivists differentiate between constructivism⁶ and subjectivism, stating that object and subject are always bound, with no object able to be described in isolation from the conscious being experiencing it. Nor can an experience be explained in isolation from its object (Crotty, 1998). From this perspective, we do not discover meaning but construct it. "All reality, as meaningful reality is socially constructed" (Crotty, 1998, p. 54). Like the radical constructivist position, this leaves the criteria for assessing knowledge outside the realm of appealing to truth or validity from an external source. However, this view of the acknowledgement of the object as separate from the knowledge maker ensures that the person making sense of the object is required to recognise the importance of the external object or source of knowledge. This means that researchers are required to focus on the object of inquiry and enter "[A] dialogue with the materials. Interrogating all the heterogenous objects. Indexing their possible uses" (Crotty, 1998, p. 51). Constructivist research should not be merely the researcher's personal reflections but an engagement with the data, using the appropriate theoretical and methodological tools to make new meanings.

My own perspective is influenced by both these schools of constructivist thought. Along with the radical constructivists I cannot commit to knowing that there is a world beyond what I experience because I can only know what I experience. Past experiences also influence how I can know in the future. However, acknowledging that there are multiple ways of knowing and perspectives suggests that there are objects beyond ourselves, which are being experienced by other living subjects. A constructivist position requires acknowledgement and attention to be paid to these other ways of knowing to ensure an advancement of knowledge via a range of perspectives.

Constructivism does not, then, resign a researcher to a position of solipsism but offers the opportunity to approach research questions from a particular position, acknowledging the social construction of shared knowledge. From both the radical and traditional constructivist perspective, we cannot know a real world beyond our experience of it.

⁶ Crotty uses the term 'constructionism' perhaps reflecting a sociological perspective. See footnote 4.

Although there can be no reference to a *real* world to determine the truth of the knowledge, there are well-established criteria by which new knowledge can be judged, such as consistency, coherence, richness of referential concepts and utility (Riegler, 2001). And although we can never know the real world, acknowledging that knowledge is constructed in a social setting provides potential for the creation of new knowledge, building on existing socially constructed understandings. However, Crotty (1998, p. 59) warns that it is important not to lapse into reification, where “we take ‘the sense we make of things’ to be ‘the way things are.’”

In summary, social constructivism asserts that knowledge is historically and culturally specific and founded in language and social interactions (Young & Collin, 2004). The construction of knowledge is a social and recursive process, where knowledge and social action are linked and particular versions of reality lead to particular forms of action and away from others, thereby influencing the future versions of reality (L. Cohen, et al., 2004).

It is important to question the constructed meanings brought to the research process and a critical approach is required to acknowledge and challenge the restrictive and oppressive elements of our cultural legacy (Crotty, 1998). This brings me to the theoretical perspective governing the methodology of this project: Critical Theory.

Critical Theory

Critical theory has its origins in Marxist thought and the traditions of the Frankfurt School but is not co-extensive with either or both (Crotty, 1998). From both backgrounds critical theory has inherited the fusing of philosophy, history and economics and a focus on the importance of action and social interaction. Critical theory combines a range of philosophical thought and research methodologies. The defining and uniting feature of critical theory is its goal of emancipation in a world shaped by injustice and subjugation (Bohman, 1999; Kincheloe & McLaren, 2011). Critical theories are: explanatory, studying problems in current social reality; practical, identifying how to improve the problems; and normative, providing norms for criticism and goals for social transformation (Bohman, 2013; Davidson et al., 2006; Delanty, 2011). The purpose of critical theory is to analyse power relations, privilege and oppression so that injustice can be addressed. Critical theorists have a Marxist focus on the dominance of economic

forces, which can be powerful instigators of inequality in the form of capitalism. This is reinforced via hegemony where people willingly comply with the social norms of the forces of production. This means that they willingly maintain their existing social status (Agger, 1991; Crotty, 1998; Kincheloe & McLaren, 2011). Part of the emancipatory goal of critical theory is to make people more aware of the circumstances and practices that inhibit their freedom.

Critical theory is committed to interdisciplinary research (Agger, 1991; Rexhepi & Torres, 2011). Since the goal of critical theory is emancipatory, it is methodologically pluralistic. This allows for power relations to be examined from the perspective of variously situated individuals, institutions and systems. Critical theory does not look for universal features of scientific knowledge but focuses on the social relations between inquirers and other actors, acknowledging that all theories of understanding are interpretations (Bohman, 1999). Critical theorists avoid specificity so diversity can be embraced and disagreement between perspectives acknowledged (Kincheloe & McLaren, 2011).

Such a pluralistic approach creates an epistemological and methodological challenge for research: if there is no ‘grand theory’ of knowledge and all interpretative stances and research methods are to be embraced, how do researchers decide which theories and methodologies to use? Critical theory suggests that ideas should be judged by their consequences. Critical theory does not determine how we see the world but helps us devise questions and strategies for exploring it (Kincheloe & McLaren, 2011). No potential theory or methodology can be rejected because all add to the diversity of understanding. Self-reflection is required to acknowledge any weaknesses and limitations in research, however (Bohman, 2013). In this way, critical theorists are reflexive practitioners, reviewing their own and others’ methodologies, analysis and interpretations and querying whether these are unwittingly contributing to the reproduction of systems of oppression. A critical theory perspective requires researchers to interrogate “commonly held values and assumptions, challenge conventional social structures and engage in social action” (Crotty, 1998, p. 157).

These then are the theoretical underpinnings of this research project: an epistemology which acknowledges that we can only know the world through our interactions with it and

a theoretical perspective that requires analysis of power interests with a goal of improving society. This means that, as the researcher, I assess the world via the research participants' experiences as captured in the research process. This theoretical and philosophical perspective guided my approach to investigating the current research topic: understanding the conditions under which young people are able to fulfil their occupational aspirations. Also guiding, and to some extent, dictating the methodology was the existence of the datasets that provided potential answers to the research questions. These philosophical, theoretical and practical resources determined that a mixed methods methodology was the appropriate way to investigate the circumstances under which young people might meet their teenage vocational aspirations.

Methodology: Mixed Methods

The previous two sections of this chapter have shown that I understand research to be a political process grounded in a theoretical and philosophical stance. My theoretical perspective allows for and even encourages the reflexive use of multiple methods of inquiry, analysis and interpretation. However, one of the primary challenges for mixed methods research is that it is not based on a single ontological and epistemological position (Bergman, 2011; Bryman, 2006; Fielding, 2009; Smith, 2006) or even that is merely positivism in disguise (Giddings, 2006; Hesse-Biber, 2010). The emphasis for mixed methods research is on procedural and pragmatic concerns. Generally speaking, mixed methods research is not seen as a methodology, *per se*, but a range of methods. However, below I show that mixed methods are an appropriate methodology when informed by an epistemology and theoretical perspective.

Despite the criticisms of mixed methods research for lacking a theoretical stance, the increased use of mixed methods has led to the identification of a conceptual positioning. Researchers and theorists (see for example, Feilzer, 2010; Johnson & Onwuegbuzie, 2004; Morgan, 2007) have argued that pragmatism is the best paradigm for mixed methods research. These scholars argue that this is the 'third paradigm' of research which offers an alternative world view and has surpassed the paradigmatic dichotomy of positivism and constructivism. Pragmatism focuses on the problem to be researched and the consequences of the research (Feilzer, 2010) and draws on the thought of classical pragmatists Charles Sanders Peirce, William James and John Dewey. Pragmatism's emphasis on the social organisation of knowledge allows for a range of perspectives, of

which the researcher's is only one (Bohman, 2013). The pragmatic ontology states that the current or instrumental truth is to be determined by the practical consequences of that 'truth'. In this way pragmatism provides a response to the problem of pluralism in constructivist social science: the 'best' theory is the one which enhances communication and debate to inform practice (Bohman, 2013). From this perspective the research question is of primary importance – more important than either the method or theoretical lens (W. E. Hanson, Creswell, Clark, Petska, & Creswell, 2005; Lowe, 2010).

As already noted, this project is guided by a critical theory perspective, which shares some of the features of the pragmatists' views. These include the acknowledgement of social construction of knowledge and the resulting importance of a reflective approach by researchers (Morgan, 2007). However, it is not a pragmatic paradigm that drives this research, and like others (H. Chen, 2006; Giddings, 2006; J. Mason, 2006; Reichardt, 2006; Rist, 2006; Sale, 2002), I question whether pragmatism *is* a paradigm. Crotty (1998) summarises the critique of the early pragmatists by stating that their view of the world was that it was to be explored and not subjected to radical criticism. The essential difference between pragmatism and critical theory is that pragmatism acknowledges that past interpretations and classifications can influence and distort empirical material while criticalists (working from a critical theory perspective) make a sustained effort to identify and call into question past and concurrent interpretations (Crotty, 1998).

Mixed methods undertaken with a critical theory perspective do then meet the requirements of a methodology, which Crotty (1998) describes as the strategy, plan of action and process of design behind the choice of methods. A methodology for social inquiry engages four domains of issues and assumptions: philosophical, inquiry logics (research questions, purpose, design and quality criteria), guidelines for practice (the practical implications of the first two domains) and socio-political commitment (J. C. Greene, 2006). "The aim of methodology is to help us *understand*, in the broadest possible terms, not only the products of scientific enquiry but the process itself" (Kaplan, 1964, cited in Brannen, 2005, p. 182). It is in this metaphysical perspective that this project is grounded – a multi-method strategy has been adopted to serve particular theoretical, methodological and practical purposes.

Mixed Methods Research

The constructivist theoretical perspective requires that explanations for social phenomenon need to be in dialogue, with questions being asked and answered in different ways (J. Mason, 2006). Like other constructivist research methodologies, the foundation of mixed methods research is that the methods should be chosen to answer the research question and match the research data. Qualitative and quantitative methods can produce more complete knowledge because information is gathered and analysed in different ways (Johnson & Onwuegbuzie, 2004). It is possible to ‘qualitate’ quantitative data and vice versa (Driscoll, 2007; Feilzer, 2010; Sandelowski, Voils, & Barroso, 2006). The main reasons for using mixed methods are triangulation and/or corroboration, elaboration or clarification, obtaining contradiction or new perspectives from the other method, and/or expansion of the breadth and range of enquiry (Bryman, 2006). Mixed methods research “often offers considerable advantages compared to mono-method research. It can cross-validate or complement individual findings, and it may be able to combine different strands of knowledge, skills, and disciplines” (Bergman, 2011, pp. 274, 275). In effect, the intention of most researchers using mixed methods is to obtain a fuller understanding of their object of investigation. “The whole is greater than the sum of the parts when qualitative and quantitative approaches and methods are combined.” (Smith, 2006, p. 252). Positivist research methods of epidemiology have been unable to adequately incorporate the complexity of disciplines like public health (Baum, 2006). Baum (2006) states that public health is no longer merely about the absence of disease and suggests that public health researchers incorporate a socio-environmental approach, using whichever methodologies will best elucidate the topic or question.

A constructivist perspective allows for and encourages data to be interpreted in different ways with a view of adding to the ways of knowing. The data for this project was revisited after the initial data was collected to answer a different set of research questions. In order to respect the participants, data and original researchers it was important that I used appropriate analytical methods with each data set. One of the factors determining the appropriate method of data interpretation is ethical: with a constructivist epistemology there is no appeal to a real world so researchers are responsible for the theoretical models used for analysing data (von Glaserfeld, 2001).

Mixed methods researchers state that methods can be derived from how best to answer a research question via a set of research tools (Johnson & Onwuegbuzie, 2004). Research methods must then not only reflect the research question but also respect the nature of the data. For this reason the analytical methods used with each dataset in this project largely reflect the original researchers' theoretical stance. Thus, the *Pathways Project* and *Dunedin Study*, which were conducted at two different times in history but within a positivist paradigm⁷, required quantitative methods for interpretation.⁸ This analysis provided information about the occupations that a cohort of young people aspired to in the 1980s and the work that they were employed to do in the early twenty-first century.

To investigate the processes between aspirations and occupations, the *Transitions Project* data was analysed. This data was collected within a constructivist paradigm so revisiting the data using qualitative methods was appropriate. In the constructivist spirit of recognising that there are different ways of knowing, two different theoretical frameworks were employed to interpret the *Transitions* data.⁹ Frameworks can provide a scheme for “bringing together observations and facts from separate investigations; assist in summarizing and linking findings into an accessible, coherent, useful structure; guide understanding of phenomena – both the *what* and *why* of their occurrence; and provide a basis for prediction” (Evans, Coon, & Ume, 2011, p. 278). Working with these frameworks allowed the data to be investigated to identify salient factors influencing young people’s vocational decision-making.

Conclusion

A constructivist epistemology acknowledging the social construction of knowledge underpins this research. Consistent with the view that we can never know the real world beyond our experience of it, a critical theoretical perspective supports a methodology that encourages the examination of systems, traditions, beliefs and actions that reinforce inequality and oppression. The ability to identify the factors that constrain or enable people’s vocational aspirations may well have important consequences for equity of opportunity and access to a range of occupations. This theoretical background invites a

⁷ Both the *Dunedin Study* and the *Transitions Project* were administered within a framework which values empirical evidence, generally able to be understood via logic and interpreted via statistical methods to give knowledge of the social world.

⁸ See Chapter 4 for the description of the *Pathways Project* and *Dunedin Study* research methods.

⁹ See Chapter 7 for the description of the *Transitions Project* research methods.

methodology that reflects the research question. For this project, where existing data was used, the appropriate methods of analysis were determined by the research questions and the nature of the data. This is a reflexive process. As Crotty (1998, p. 65) notes, “Constructionism has crucial things to say to us about many dimensions of the research task. It speaks to us about the way in which we do research. It speaks to us about how we should view its data. We will do well to listen.” For this ethical reason, mixed methods of analysis were used: quantitative for the *Pathways* and *Dunedin Study* data and qualitative for the *Transitions Project* data.

In this chapter I have outlined how the epistemology, theoretical perspectives and overriding methodology influenced the research methods. In the following chapter I address the detail of the methods of data collection and analysis for the Pathways and Dunedin Studies before presenting the results from these two projects in Chapters Five and Six.

Chapter 4

Methods I

To address the topic of this thesis, teen vocational aspirations and adult occupations, I have analysed three different data sets. The *Pathways Project* and the *Dunedin Study* differ from the *Transitions Project* in their research contexts and methods so the data collection and analysis methods of the *Pathways Project* and *Dunedin Study* are described in this, the first of two chapters about research method. In Chapter Five the results from the *Pathways Project* are presented. Chapter Six presents a comparison of the *Pathways* and *Dunedin Study* results and the remaining chapters address the *Transitions Project* methods and findings.

The Pathways to Employment Project

The *Pathways to Employment Project* is one of three related research projects that co-existed in New Zealand in the 1980s. All were concerned with child and adolescent development, health, education, employment and general well-being. The other two projects are the Dunedin Multidisciplinary Health and Development Research Study (the *Dunedin Study*), which will be described in more detail below, and Project FAST (Future Aspirations, Subjects and Training).¹⁰ The *Pathways to Employment Project* was conducted in 1986 and originally conceived as a longitudinal multidisciplinary study of health, education and employment factors. However, the study did not continue and eventuated in only this one episode of data collection.

Information was collected from 4225 teenagers who were aged 14 or 15 and were in the third and fourth forms (now known as year 9 and 10) in 27 Otago¹¹ high schools. All of the 28 secondary schools in Otago were invited to participate in the study but one urban co-educational school was unable to provide a full data set so was excluded from the sample. Included in the study were four co-educational and eleven single sex schools (six girls' and five boys' schools) from the two urban centres, seven co-educational secondary schools in rural centres and five area schools from smaller rural areas. There

¹⁰ Project FAST collected data about educational and vocational knowledge and plans from 35,000 senior high school students in New Zealand Central Districts in 1987. The primary purpose of Project FAST was to provide this information back to schools rapidly. Project FAST is not part of the current research.

¹¹ Otago is a province in the southern half of the South Island of New Zealand and has a current population of about 194,000 people.

were 5922 eligible students but consent was not received from the parents of some, others did not return their questionnaires and a few others left school prior to the administration of the questionnaires. This left a total of 4,225 student participants with complete data.

The assessments were administered at school and included reading comprehension, spelling and mathematics tests. The students also completed a questionnaire which contained questions about: ethnicity, home environment, school, hobbies, self-esteem, mental and physical health, future plans, work experience, and future educational and job plans. The data from the questions relating to occupational choice are the focus of this research. Some of the survey questions were replicated from other research projects (see Silva, 1987 for details) but the future careers questions were developed specifically for the *Pathways Project* after consultation with the Deputy Chief Vocational Officer at the Department of Labour at the time. The questions which are the focus of the current project asked participants if they had a particular job that they hoped to get and if so, required a first and second choice of chosen occupation. They were also asked whether they thought that they had a good, fair or poor chance of getting that job, or if they did not know the likelihood.¹²

The Principal Investigator of the *Pathways Project*, noted that, “Most students were able to complete the questionnaire without help in one school period. Some students who required additional help took longer than one school period” (Silva, 1987, p. 2/29). Participants were guaranteed confidentiality and the completed questionnaires were sealed in an envelope and sent directly to the Dunedin Multidisciplinary Health and Development Research Unit for coding.

Within the sample of 4225, there was a group of students who were also participants in the longitudinal *Dunedin Study* described in the next section of this chapter. Most of the teenage *Dunedin Study* members completed their *Pathways Project* assessment at school alongside their peers but a small number were invited to complete the *Pathways Project* questionnaire when they participated in their phase 15 assessment.¹³ These were the *Dunedin Study* members who lived outside of the Otago province, had already left school

¹² See Appendix 2 for the *Pathways* questions about future employment plans.

¹³ Each *Dunedin Study* data collection period is known as a ‘phase’ and the age of the *Dunedin Study* members describes what the phase is called. The two phases particularly relevant to this thesis are phases 15 and 32, when the Study members were aged 15 and 32 respectively. Phase 15 occurred in 1987.

or did not consent to participation in the *Pathways Project* at school. By the end of phase 15, in 1988, *Pathways Project* data had been collected from a total of 936 *Dunedin Study* members, of whom 878 attended the age 32 assessment of the *Dunedin Study*, where they gave details of their current jobs. It is these 878 people who are the focus of the next two chapters.

The Dunedin Multidisciplinary Health and Development Research Study

The *Dunedin Study* is a longitudinal, multidisciplinary project. The 1037 *Dunedin Study* members were drawn from a cohort born at the Queen Mary Maternity Hospital in Dunedin, New Zealand between 1 April 1972 and 31 March 1973. These infants were first followed up at the age of 3, and then at 5, 7, 9, 11, 13, 15, 18, 21, 26, 32 and most recently at 38. At each of these ages the *Dunedin Study* members came to the Dunedin research unit for a day of tests, evaluations, questionnaires and interviews. At the time of writing 1006 of the original cohort were still alive. The *Dunedin Study* has a very high rate of follow-up with 95% of the living cohort participating at the last data collection phase in 2011/12. Lifelong data has been collected on physical (including dental) and mental health along with research into various aspects of the participants' lives at age-appropriate stages. This has included assessments about their education and cognitive skills, injuries, living conditions, work and income, drug and alcohol use, relationships, sexual health and behaviours, self-harm and driving behaviours. The Study has accumulated a large amount of information on almost every aspect of the Study members' lives (see Silva & Stanton, 1996 for a summary of the first 21 years of the Dunedin Study).

A total of 878 of the *Dunedin Study* members who had full data from the *Pathways Project* also gave full data regarding their employment at the *Dunedin Study* assessment when they were 32 years of age in 2004/5. They were asked about their current employment and their work history since their last assessment at age 26.¹⁴ This ten minute interview was administered by trained interviewers within a fifty minute session that also asked about their education, finances, spirituality, coping strategies and self-harm. This occurred in the afternoon of the daylong multidisciplinary assessment.

¹⁴ See Appendix 3 for the full Phase 32 work questionnaire.

Details were obtained about their most recent occupation which was coded by interviewers using the 1999 New Zealand Standard Classification of Occupations (Statistics New Zealand, 2001). The allocation of codes was checked by interviewer colleagues and, in cases of dispute, the assessment manager was consulted. Regular reliability checks were performed by the assessment manager.

Age 32 was chosen as the age for analysing adult work data for this project because by this age most individuals have completed formal study and travel and have become established in their adult occupation.¹⁵ On average, at age 32 *Dunedin Study* members were employed in their current occupation for one and a half years (Melchior, et al., 2007). People in their early thirties are also less likely to have selected out of stressful jobs than older workers. Age 32 was also chosen because it was the most recently completed phase of data collection¹⁶ and because I was employed as an interviewer at phase 32 which gave me a good understanding of the coding process and context in which these questions were asked.

The Pathways and Dunedin Study Participants

As noted there were 878 individuals who were participants in both the *Pathways Project* in 1986 when they were aged 14 or 15 and the *Dunedin Study* eighteen years later in 2004 or 2005.¹⁷ Forty-nine percent of these people were female and they were primarily New Zealand Pakeha.¹⁸ Four per cent identified as Māori and a small number were from Pasifika and Asian families.

Overall, this cohort was from slightly more affluent families than their New Zealand peers. The socioeconomic status (SES) of the Pathways/Dunedin Study participants' families of origin was measured with the Elley-Irving index, across a six point scale

¹⁵ Eight percent of *Dunedin Study* members were not employed in paid work at age 32. All but four were women and the majority were in unpaid work caring for children. The age 26 occupations of these participants were included in the analysis. This is explained further in Chapter 6.

¹⁶ The most recent data collection phase (at *Dunedin Study* members' age 38) began in May 2010 and was completed in April, 2012. This meant that there was not full age 38 work data when this project began in 2011.

¹⁷ The participants in the *Pathways Project* and *Dunedin Study* are the same people at different ages. For most descriptions in this thesis they are referred to in relation to the Study that is being described, usually for comparison purposes. When referring to the same participants in both studies, they are called Pathways/Dunedin Study participants.

¹⁸ New Zealander of European descent.

(where 6= unskilled labourer and 1=professional)¹⁹ from the highest status parental occupation. The average SES of the cohort was 3.2. The chart below (Figure 4.1) shows the percentages of *Pathways* participants who come from each SES group compared to all New Zealand employed males at the most recent census (Statistics New Zealand, 1985). The comparison was with males only because the New Zealand census measured only male SES.²⁰ On average, *Pathways/Dunedin Study* participants came from more affluent families than average at the time. Comparatively fewer *Pathways/Dunedin Study* participants' parents were employed in elementary and trade occupations and more in managerial positions. However, the *Pathways/Dunedin Study* participants came from families across the SES spectrum with 36% of them having parents in professional or managerial positions, 58% of them having parents working in middle level occupations and 6.3% from elementary positions.

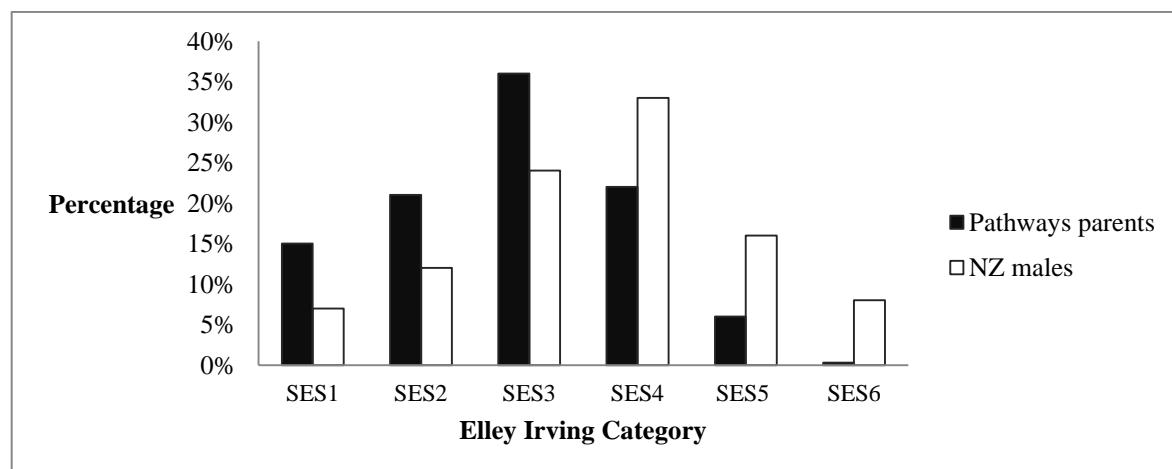


Figure 4.1. Comparing SES Distributions for Pathways/Dunedin Study Participants' Parents and NZ adult males.

Overall, the *Pathways/Dunedin Study* participants reflected the Dunedin population at the time of their birth. The cohort was evenly split by gender, mainly Pakeha and had a slightly higher average socio economic status than the rest of New Zealand.

¹⁹ The Elley-Irving index is described in detail in the next section of this chapter, which details the methods of analysis.

²⁰ The New Zealand census recorded only male SES while the *Pathways* childhood SES measures the highest status of either parent. It is unlikely that the difference in average SES is accounted for by this methodological difference, given the relative status of male and female occupations in the 1980s: Most *Dunedin Study* members' higher status parental occupations were from their fathers.

Pathways Project and Dunedin Study Measures

The analyses described in the next two chapters use measures of individuals' socioeconomic status (SES), unemployment, IQ, similarity of aspirations and occupations, and 'gendered' occupations. The measures and how they were derived are described below.

As noted, family SES was measured with the Elley-Irving index, across a six point scale (where 6= unskilled labourer and 1=professional).²¹ This assessed parents' self-reported occupational status across their child's childhood. This was done using the average highest SES of either parent across 7 assessments from birth to age 15. This variable of childhood SES reflects the socioeconomic conditions experienced by the participants as they grew up (Poulton et al., 2002).

It is important to acknowledge that SES is a constructed concept, generally incorporating education and income to create a hierarchy of monetary and social advantage. It could be argued that it is an overly simplistic way to measure advantage and may disguise the impact of other factors such as ethnicity, gender and geographic location. Debate about how best to accurately measure social status abounds with a range of different measures and suggestions for inclusion of different factors such as health, household composition, wealth (beyond income) and literacy. As noted in Chapter Two, it has been suggested that the concept of social status may obscure the impact of class on inequity (Kincheloe & McLaren, 2011). While this is not the place to enter into a debate about the merits of the use of SES measures it is important to acknowledge that, from a critical theorist's perspective, measures of SES are not straightforward. However, SES is a widely accepted measure of advantage and disadvantage, which has been shown to correlate with health (Adler & Ostrove, 1999; D. R. Williams, Yan Yu, Jackson, & Anderson, 1997), well-being (Luo & Waite, 2005) and educational (Sirin, 2005) outcomes. And, as noted in Chapter Three, when working with the data from the *Pathways Project* and *Dunedin Study*, my ethical obligation is to use well-established, reliable and valid quantitative methods and tools of analysis.

²¹ The Elley-Irving index was updated in 1985 to include 315 occupations. Examples of jobs at each scale are: 1, accountant, doctor; 2, engineering technician, detective; 3, electrician, factory manager; 4, chef, signwriter; 5, shearer, café assistant; 6, barman, factory labourer.

Participants' IQ was measured with the Wechsler Intelligence Scale for Children-Revised at ages 7, 9, 11, 13. The mean of these scores gave a measure of childhood IQ. Like the discussion regarding SES earlier, there are concerns with measuring the constructed concept of IQ. There are acknowledged challenges to the concept of and practicalities of IQ testing (Richardson, 2002) but it was considered a useful and standardised measure of generic ability for this cohort. Constructivism requires researchers to use appropriate, useful, consistent and fruitful methods (Kuhn, 1977). Using this measure also avoided the potential confounders inherent in the measures of academic attainment, namely individual perception and confidence about ability (Furlong & Biggart, 1999; Nurmi, et al., 2002; Schoon, 2001).

Pathways participants were asked to record their desired adult occupation (if they had one) and *Dunedin Study* members provided information about their most recent occupation. All occupations (adult and teen aspired) were coded using the New Zealand Standard Classification of Occupations (1999) so that they could be directly compared. The NZSCO groups similar occupations into nine groups.²² These are: Legislators, administrators and managers; Professionals; Technicians and associate professionals; Clerks; Service and sales workers; Agricultural and fishery workers; Trades workers; Plant and machine operators and assemblers; and Elementary occupations. Each category combines occupations which have been deemed to have similar skill level and require similar amounts of education and experience. It is noted that “skill level is applied as a guiding principle to differentiate between the major groupings of NZSCO and determine which major group an occupation belongs to” (Statistics New Zealand, 2001, p. 11). The NZSCO divides each of the nine major groups into three smaller classifications within which each particular job is situated. A five digit code is derived – the first is the major group (such as legislators, administrators and managers), the second is the sub-major group (such as corporate managers), then the minor group (specialised manager), followed by the unit group (research and development managers) and lastly the occupation (quality assurance manager). Each occupation has a description of the occupation, its tasks and the training and experience required.²³

²² At the time of the *Pathways* data collection, in 1986, the NZSCO contained only seven groups of occupations (professional, administrative, clerical, sales, service, agricultural and production). Many of *Dunedin Study* members' actual jobs at age 32 could not be coded with the 1986 NZSCO. It was decided to code the *Pathways* aspiring jobs using the 1999 NZSCO to make direct comparison possible.

²³ See Appendix 6 for a description of some of the challenges in working with this coding system.

The NZSCO occupational levels do not provide a precisely ordinal scale but provide an indication of occupational level. As noted above (and in Appendices 5 and 6) there is some subjectivity in the allocation of codes. For these reasons a binary categorisation of managerial/professional and ‘other’ was used in several of the analyses. The ‘managerial/professional’ category includes the managerial, professional and associated professional/technical major levels of the NZSCO classifications. The clerical, sales and service, agriculture and fisheries, trades, plant operators and elementary occupation levels were included in the second group. This demarcation was intended to capture careers requiring a tertiary level qualification and those which do not.

Pathways participants’ chosen future jobs and *Dunedin Study* members’ actual jobs were also coded for gender dominance. The allocation of teen vocational aspirations and adult occupations to gendered groups was guided by the work of Pringle et al (2010) who developed a checklist which identified sixty occupations across all occupational categories (Pringle, et al., 2010). Thirty were occupations performed by at least twice as many women as men and the other thirty by twice as many men as women. Pringle’s (2010) list was originally developed in 1979 based on New Zealand census data from 1971 so it was historically relevant for the *Pathways* participants’ occupational choices. The decision was made to code the *Dunedin Study* adult occupations with the same classifications for comparative purposes but also because the *Dunedin Study* members made their career choices in the 1980s, when the gendered nature of occupations was more traditional. Pringle’s (2010) study required the participants to choose the five occupations that they would most like to do in order of preference from the list of 60 (30 ‘female’ and 30 ‘male’). While the *Pathways* participants gave free text answers (rather than choosing from a list) and the *Dunedin Study* members gave details of their actual jobs, Pringle’s (2010) checklist was a guide to occupations that were dominated by one gender in the 1970s, only a decade earlier than the *Pathways* data was collected and in a timeframe understood by the *Pathways* participants (who were born in 1972).

Occupations recorded by *Pathways* and *Dunedin Study* participants that were not included on Pringle et al’s (2010) list were defined as ‘male’ or ‘female’ by referring to the formula which derives a level of female or male ‘domination’ of occupations (Else & Bishop, 2003). To be considered ‘female dominant’ an occupation requires at least 70% of its workers to be women. Because of the different numbers of men and women in the

workforce, to be considered ‘male’, an occupation requires at least 80% of the people working in that occupation to be men. Occupational information obtained from the 1986 census (the year the *Pathways* data were collected) gave the numbers of men and women working in each occupation, enabling a classification of male or female dominated or neither (gender neutral).

The allocation of gendered dominance of occupations was not always straightforward. The checklist of gendered occupations did not always compare precisely with the teen aspirations and adult jobs coded with NZSCO codes. So, the process of allocating occupations required interpretation of occupational titles, codes and detail as well as ascertaining whether these occupations corresponded with those on the gendered checklist.²⁴

Measures for comparing similarity of *Pathways* Occupational Aspirations and *Dunedin Study* Jobs

Four levels of measure of similarity were derived to compare teen aspirations with adult occupations. This was done using NZSCO codes and researcher interpretation. If teen and adult occupations had the same NZSCO code or were judged to be very similar (for example, surgeon and anaesthetist, which have different NZSCO codes) the occupations were categorised as the same. A second group was made for those who had similarities in the type or subject of work but the occupations were not in the same NZSCO major group level. A fairly generous set of criteria were employed in the determination of this group: similarities in teens’ choices and adult occupation were included, such as type of workplace (for example, working outdoors), type of skills required (such as artistic or technical skills) and topic of the work (such as being in the same type of industry). Examples include having a teen aspiration of chef and an adult job of café manager and an intention to be a dance instructor and the adult occupation, teacher. The third group included all those who aspired to and worked in occupations at the same NZSCO major level but the occupations are not similar or related. Examples are the teen aspiration of veterinarian and adult occupation of psychologist or hoping to become a mechanic but working as an electrician. The final group was comprised of those whose teen aspirations

²⁴Detail on the process of deriving the *Pathways* gender codes is available in Appendix 7, the list of gendered *Pathways* occupations in Appendix 8 and the process of deriving the *Dunedin Study* gender codes in Appendix 9.

and adult work bore no resemblance to each other, either in type of work or NZSCO level.

The *Pathways Project* data was described and compared to the *Dunedin Study* dataset via the measures described above. Descriptive and comparative statistics were used. Pearson correlations were used to measure the relationship between two variables. *T* tests and linear regressions (for continuous data) and chi square and logistic regressions (ordinal data) were used to determine whether the *Pathways* and *Dunedin Study* data were significantly different from each other and to investigate any differences between groups within the cohort, particularly by gender. The regressions were performed using Stata 8.0 software and the other analyses via Excel, 2010. Before comparing the results of the two studies in Chapter Six, however, I report the occupational aspirations of the *Pathways* teenagers in the next chapter.

Chapter 5

Pathways to Employment

In 1986 and 1987, as part of the *Pathways Project*, a cohort of 878 teenagers aged 14 and 15 years²⁵ were asked about their intended occupational choices and the likelihood they had of attaining that occupation. The findings of the data generated from these questions are presented in this chapter. Firstly there is a comparison of those who had a future career in mind with those who did not. Then, the career choices of those with intended occupations are investigated, by category of occupation and then by gender of the participants. The chapter concludes with a brief discussion of the findings and their implications.

Results

The *Pathways* participants were asked the question “*Do you hope to get a particular job?*” Twenty-five per cent (n=222) of the 878 teenagers did not have a particular occupation in mind. There was very little difference between this group and those who did have a career in mind. The gender split of the two groups was very similar: 47% of those without a career in mind were female and 50% of the participants who stated a career choice were of each gender. The two groups of teens did not differ significantly in cognitive ability. The mean IQ of those with specific aspirations was 108.0 while the mean IQ of those without any particular career in mind was 106.5, $t(857)=0.94$, $p=0.35$.²⁶ The groups did not differ significantly by socio-economic status (SES).²⁷ The average family SES of both groups was 3.2 on the 6 point scale, $t(874)=0.15$, $p=0.88$.²⁸

Thus, the teens without specific career aspirations did not differ greatly in terms of family background, academic ability or gender from their peers who had an idea of their adult occupation.

²⁵ As noted in previous chapter, the majority of the *Pathways* participants completed the survey at school. A small number from outside of Otago and those who had left school completed the survey as part of their *Dunedin Study* phase 15 assessment in 1987.

²⁶ Nineteen participants did not have full childhood IQ data. Fifteen had aspirations for an occupation and four did not.

²⁷ The SES of the *Pathways* participants’ families was measured with the Elley-Irving index, across a six point scale (where 6= unskilled labourer and 1=professional) using the average highest SES of either parent across seven assessments from birth to age 15.

²⁸ Two participants did not have full childhood SES data. Both had occupational aspirations.

Pathways Participants’ Career choices

656 teenage participants from the *Pathways Project* said that they *did* have a specific job in mind and provided an occupation in response to the question “*What is your first choice for a future job?*”²⁹

There were 622 teenagers who gave a first choice for a job with an occupation that could be coded using the NZSCO system, under which each occupation obtains a specific code. A further 34 teenagers had a specific job in mind but described jobs which were not able to be coded with the NZSCO codes. Reasons included occupations not available in New Zealand (such as astronaut), having very general aspirations (for example, ‘a well-paid, enjoyable job’ or ‘a job where I can travel’), providing the name of a specific workplace without defining the actual occupation and illegible answers. Those with codable answers described a total number of 107 jobs that they would like to do when they were adults. The most commonly described occupational aspiration was the intention to be an accountant (37 participants’ first choice job), followed by being a lawyer (33), a teacher (32),³⁰ a pilot (28), being in the armed forces (26), an architect (26) and wanting to be a chef (23 people). Figure 5.1 shows the most popular jobs, chosen by five or more *Pathways* participants.

²⁹ *Pathways* participants were asked for first and second choice jobs but because 126 people gave no second choice, the focus here is on the first choice jobs.

³⁰ The category ‘teacher’ includes primary school teacher, specialist teacher (such as special needs or ESOL) and unspecified (ie ‘teacher’) but does not include secondary teacher. The reason for differentiating between secondary and other teachers was that the data suggested that teens who aspired to secondary teaching careers described the subject they hoped to teach, for example PE teacher or English teacher. Since I had to allocate the generic category ‘teacher’ in order to code it, I decided it was more likely that people saying ‘teacher’ meant ‘primary school teacher’. I acknowledge that this is somewhat arbitrary and making assumptions about what participants meant but, as shown later in the chapter, it makes little difference to the results.

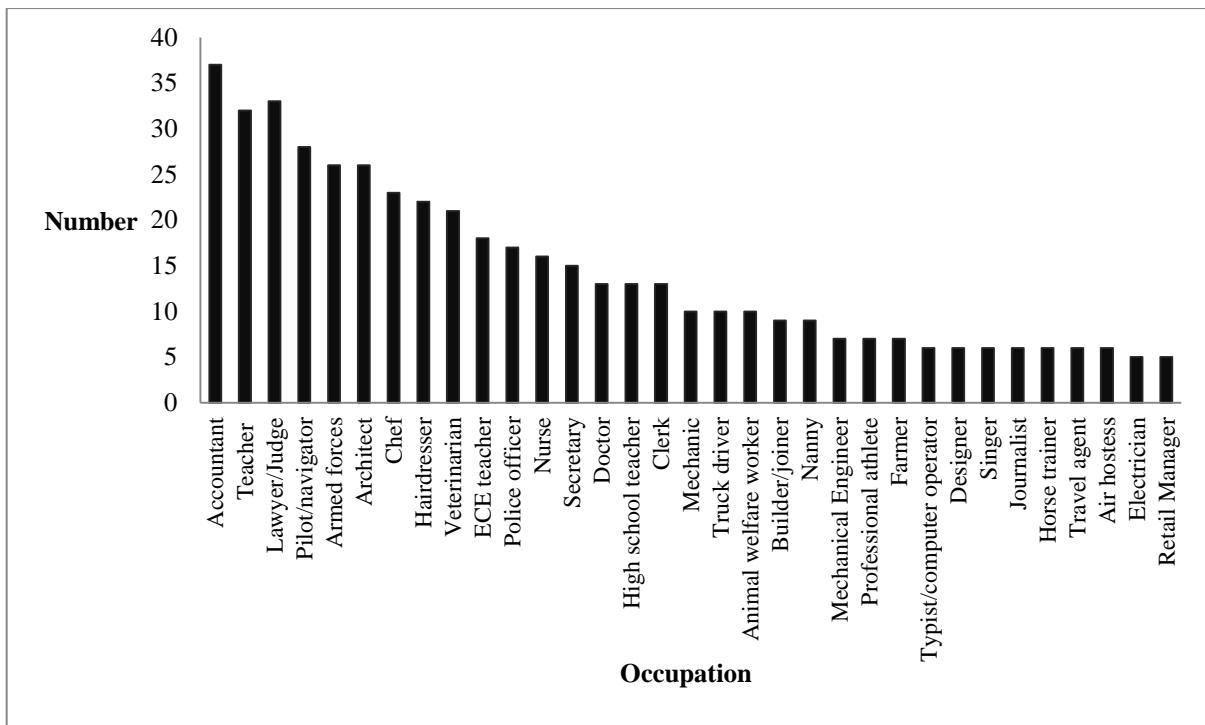


Figure 5.1. Most popular intended occupations of Pathways participants.³¹

Seventy-six per cent ($^{473}/_{622}$) of the *Pathways* participants who stated a codable first choice for a job wanted to do the thirty-three jobs shown in the chart above. The other 149 people chose 74 different jobs, with nearly half (35 jobs) of being recorded by only one person. These included a wide spectrum of occupations including politician, deer culler, astronomer, fitter and turner, marine biologist, translator, dance instructor, food decorator, nurse aide, bricklayer and a crane operator.

When the teens' aspiring jobs were separated into the nine NZSCO major groups³², 39% ($^{244}/_{622}$) wanted to be professionals while 19% (n=119) aspired to careers coded as technicians and associate professionals. Eighteen percent (n=114) wanted to go into the service and sales industries, most of whom hoped to enter the armed forces, become police officers, chefs or hairdressers. Very few participants anticipated going into unskilled work (only one person wanted to work in an 'Elementary' occupation – a courier) and only 6% (n=42) hoped to get a trade. This suggests that most of the

³¹ 'ECE teacher' is the term used for kindergarten or pre-school teacher and has a different code from 'nanny/childcare worker.' Some occupations use simplified terms on chart: police officer includes traffic officer, horse trainer includes groomer, doctor includes specialist and surgeon.

³² The groups are: Legislators and administrators (managers), Professionals (require a university degree), Technicians and associate professionals (require advanced vocational qualification), Clerks, Service and sales workers (includes armed forces, police officers), Agriculture and fishery workers, Trades workers (require trade or vocational certificate), Plant and machine operators and assemblers, and Elementary workers (require no formal qualifications).

Pathways participants had expectations of formal tertiary education and aimed at a professional career. Percentages of participants who aspired to occupations in each NZSCO category are shown below.

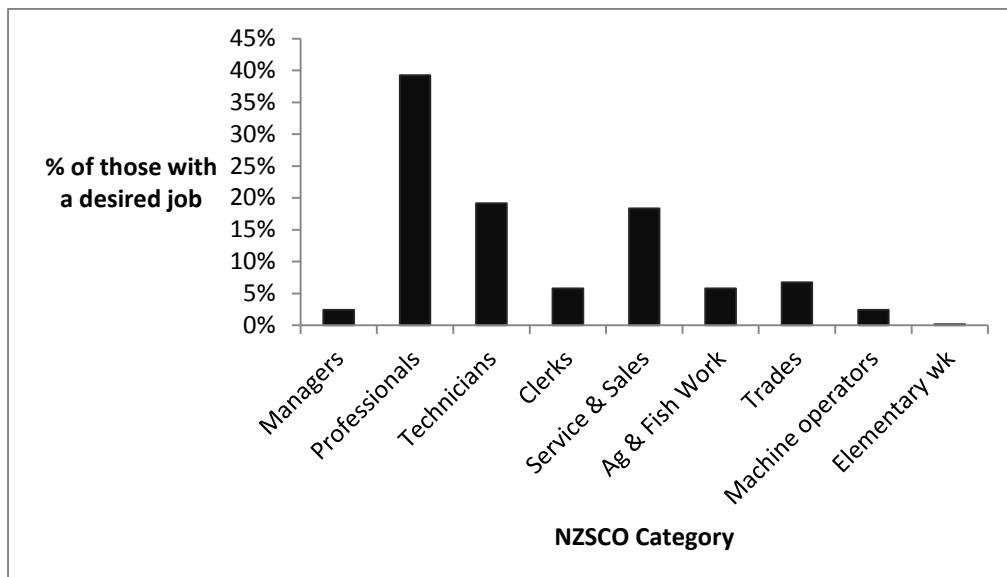


Figure 5.2. *Pathways* participants' desired occupations by NZSCO category.

At the time of data collection in 1986, the entire 4000-strong *Pathways to Employment* cohort's job aspirations were categorised via the Elley-Irving Socio-economic Scale (Elley, 1985). The *Dunedin Study* participants' aspirations for higher level occupations were reflective of this larger cohort. It was suggested by the researchers at the time that the percentage of teens who hoped to enter the professions surpassed the percentage of the current workforce employed in the professions. They expressed concern that the potential supply for highly educated and well-paying jobs would exceed the number of these jobs available and many young people would not achieve their aspirations. Meanwhile, the demand for trades, sales and manual workers was higher than the proportion of teens who aspired to these types of jobs (Silva, 1987) leaving a shortfall of unskilled and semi-skilled workers.

The *Pathways* participants' professional aspirations meant that they, too were in danger of having unfulfilled aspirations, if there were insufficient professional jobs available when they reached the job market. The relatively high family SES of the young people who are the focus of this study may have been a factor influencing their high aspirations. The mean SES of those aspiring to professional, technical and managerial occupations

was 2.9 (on the scale of 1 to 6, where 1 is high) and the mean SES of those aspiring to all other categories was 3.6. There was a weak positive association between familial SES and level of desired occupation, $r(619) = 0.25$, $p < 0.01$. A 2 sample t test showed that there was a significant difference in the familial SES of those aspiring to professional and managerial positions and those who aspired to other types of occupations, $t(619) = 8.3$, $p < 0.01$.³³ There was a modest association between SES and level of desired occupation for both boys, $r(309) = 0.27$, $p < 0.01$ and girls, $r(313) = 0.23$, $p < 0.01$. Figure 5.3 shows that teenagers from families with higher SES were more likely to be interested in pursuing professional and technical positions with 77% ($74/227$) of those from SES groups 1 and 2 hoping to go into such careers compared to 52% ($203/394$) of the young people from lower SES groups.

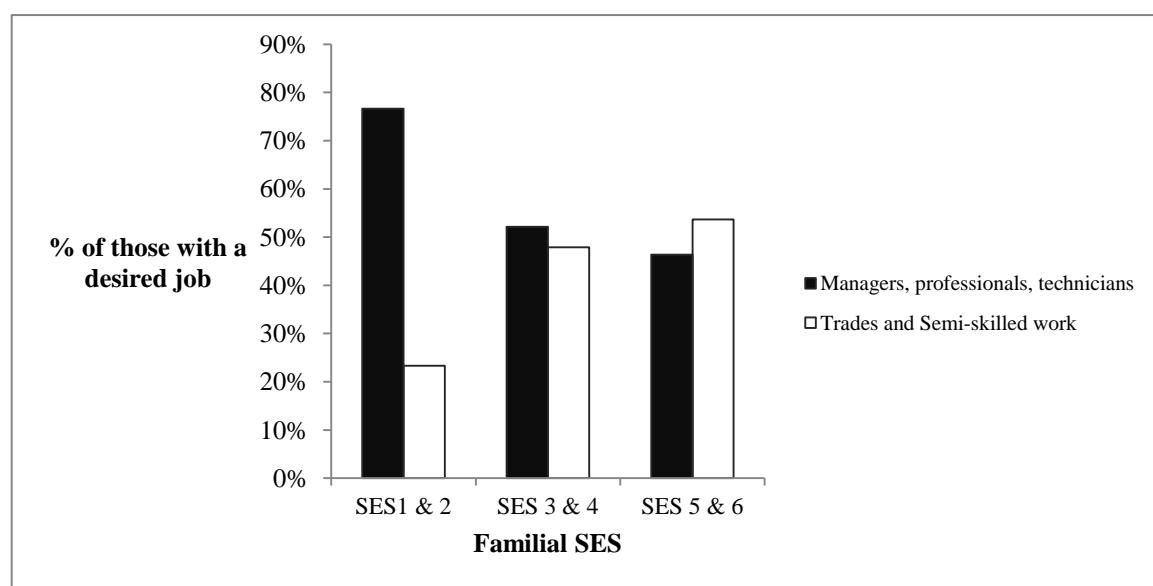


Figure 5.3. Familial SES of *Pathways* Teens and their desired occupations.

Those from SES groups one and two were significantly more likely to aspire to managerial or professional occupations than participants from families in SES groups five and six, $t(266) = 3.91$, $p < 0.01$. However, there were only 41 participants from SES groups five and six³⁴ who had specific occupational aspirations. This number was too small to meaningfully compare aspirations to those whose families were from higher SES groups. And, across all familial SES groups, the teens aspired to professional occupations. It seems that young people from all types of backgrounds were inclined

³³ One of the *Pathways* participants with an aspired occupation did not have familial SES data.

³⁴ There were a total of 53 *Pathways* participants whose families were categorised as SES group 5 or 6.

towards professional careers, although among the small numbers who were interested in ‘lower’ level occupations there was a higher proportion from lower SES groups.

Teen perceptions of the chance of obtaining their desired occupation

The *Pathways* teens were asked to rate their perceived chances of obtaining their desired adult job by indicating if they thought they had a good, fair or poor chance of getting that job or if they did not know. These young people were largely optimistic about their chances of obtaining their desired job with 86% ($^{537}/_{622}$) believing that they had a good or fair chance. Only 4% (n=26) stated that they had a poor chance of getting their desired occupation and 9% (n=59) did not know what their chances were. There was little difference in the views of the girls and boys in their beliefs about their chances of obtaining their desired job: 85% ($^{266}/_{313}$) of the girls and 88% ($^{271}/_{309}$) of the boys felt that they had a good or fair chance of getting their preferred career.

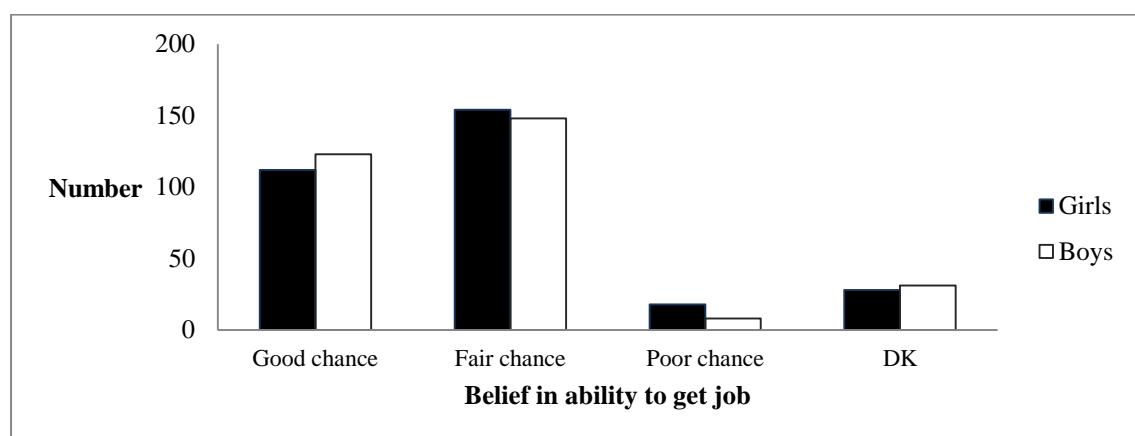


Figure 5.4. Perception of ability to obtain desired occupation by gender.

Only small numbers thought that they had a poor chance of obtaining their desired career, making it difficult to statistically compare them to those who believed that they had a good or fair chance or did not know. However, twice as many girls (n=18, 6% of girls with a specific job in mind) as boys (n=8, 3% of boys with a job in mind) thought that they had a poor chance of getting their first choice occupation. The girls who believed that they had a poor chance of getting their desired jobs were similar to other girls with occupational aspirations in their occupational choices, with several of the more popular girls’ jobs (nurse, teacher, accountant, and work with animals) included. Their choices also came from across the spectrum of the NZSCO categories while the small number of boys who thought that they had a poor chance of obtaining their desired career aspired to

occupations in higher level categories. This suggests that a small number of girls had less belief in their ability to obtain their desired occupation regardless of the level of the occupation. Perhaps this reflects some girls' lesser self-confidence compared to boys, who were less likely to doubt their chances of obtaining a job, apart from a very small number who aspired to higher level occupations. It must be remembered that there were low numbers of both genders who were not confident of their ability to get their desired occupation, however. Most participants were confident about their chances of obtaining their intended occupation.

The *Pathways* teens were more likely to believe their chances of getting their desired job were good if they were hoping to work in careers with higher NZSCO categories. A chi-square test was carried out to compare teen confidence of obtaining their desired occupation and NZSCO categories.³⁵ Teens aspiring to professional and technical occupations were significantly more confident about their ability to obtain these careers than those who aspired to lower level occupations, $\chi^2(12, N=622) = 25.97, p= 0.01$. The difference was explained by fewer of those who aspired to occupations from lower NZSCO levels believing that they had a good chance of obtaining their desired occupation.

As noted, there were very small numbers (26 of 622 people with codable career choices) who thought that they had a *poor* chance of obtaining their desired job. These were split in their desired occupation fairly evenly across NZSCO groups of professionals, technicians, service and sales, and agricultural and fishery workers.³⁶ The relationship between lower expectations of obtaining a desired job and the lower level of occupation was explained by those who *did not know* their chances rather than those who thought they had a *poor* chance of getting their desired career. The teenagers who hoped to work in 'lower' level jobs were more likely to say that they did not know their chances of getting that type of work compared with those who wanted to do professional type jobs. However, the small numbers of both those who thought that they had a poor chance of

³⁵ NZSCO levels 1 and 2 (managerial, professional) and 8 and 9 (plant operators, elementary occupations) were combined for this analysis because of the low numbers in groups 1 and 9. The categories of those who thought that they had a poor chance or did not know their chance of obtaining their desired job were also combined because of low numbers in these categories when they were divided by NZSCO level.

³⁶ None of these people aspired to be managers, clerks, tradespeople or production workers.

obtaining their intended occupation and those aspiring to lower level occupations calls for caution in interpreting this result.

As Figure 5.5 below shows, young people aspiring to farm work and trades and elementary occupations were more likely to be unsure of their chances of getting such a job than those aspiring to professional and technical careers. Twenty-two percent ($^8/_{36}$) of the young people who wanted to work in agriculture and fishing did not know their chances of getting that sort of work and 19% ($^{11}/_{57}$) of those wanting to get a trade or work in production did not know their chances of getting such work. This compares to only 8% ($^{40}/_{528}$) of those who hoped to be professionals, managers, have technical careers or work in sales or service.

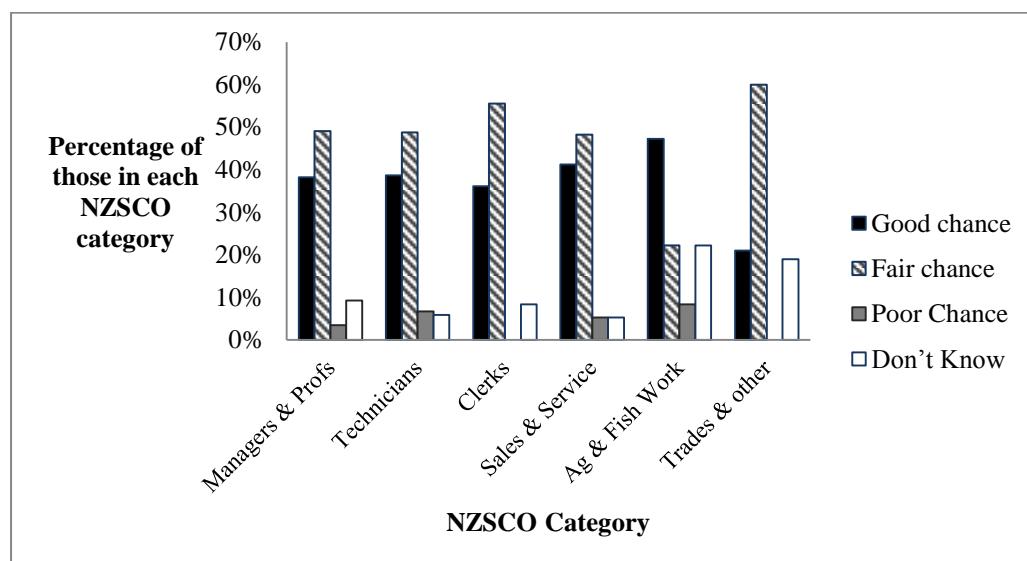


Figure 5.5. Perceived chances of obtaining desired job by NZSCO category.

Belief in ability to obtain one's desired occupation was positively correlated with SES and this association was significant, $r(619)=0.12$, $p=0.01$. As Figure 5.6³⁷ below indicates, a greater proportion of those from the lower SES groups believed that they had a poor chance of getting the job they desired than those from higher SES groups. They were also less likely to know their chances of obtaining their desired job: Sixteen percent ($^{27}/_{173}$) of those from the lowest SES groups did not know their chances of obtaining their desired occupation. Nine percent ($^{20}/_{221}$) of those from SES group three and only 5%

³⁷ There were small numbers in familial SES categories in this analysis so the top two and bottom three groups were combined, giving similar numbers in each of the new three SES categories.

(¹²/227) from SES groups one and two did not know their chances of obtaining their desired careers.

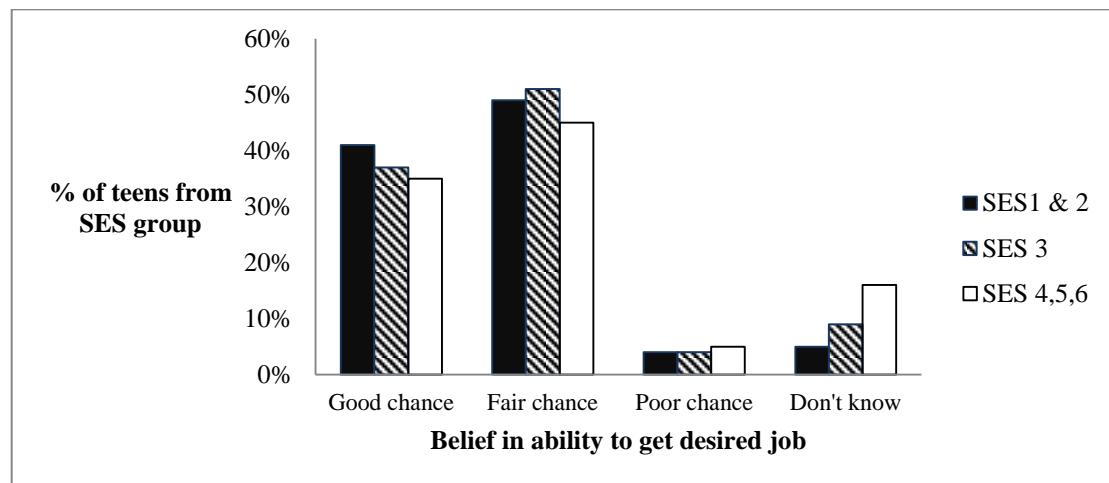


Figure 5.6. Perceived chances of obtaining desired job by familial SES.

This suggests that some of those from lower socioeconomic groups may have less knowledge about the requirements of particular occupations, which makes them unsure if they will be able to achieve particular careers. It is also possible that those from families with lower SES have fewer economic and social resources, or ‘capital’ which makes them less likely to be confident of their chances of obtaining their desired job. The concept of ‘capital’ is further described in Chapter Seven and is a source of inequity in outcomes for the *Transitions* participants as described in Chapter Nine.

It is not straightforward analysing the teenagers’ perceived chances of obtaining their desired occupation, because of small numbers in some groups but also because they came from different SES groups *and* aspired to careers at different levels. And, in both of these dissections, there are small numbers in the lower groups. As already noted, the teens’ perceptions of their ability to obtain their desired job varied depending on the type of occupation they aspired to, with the teens aspiring to ‘lower’ level occupations being less sure of their ability to get that type of job. The participants were most confident of their ability to get ‘higher’ level occupations and the largest proportion of participants aspired to professional careers. So, this was the category which required further scrutiny regarding SES. Overall, the teens from lower SES groups were less likely to know the likelihood of obtaining their desired career but was this particularly true for those aspiring to higher level careers? Figure 5.7 below shows that this was not the case. Over 85% of

the teenagers who wanted a managerial or professional occupation from every SES group except one thought that they had a good or fair chance of getting their desired job. The exception was group 4 where 73% (³²/₄₄) felt that they had a good or fair chance of getting into their desired career.

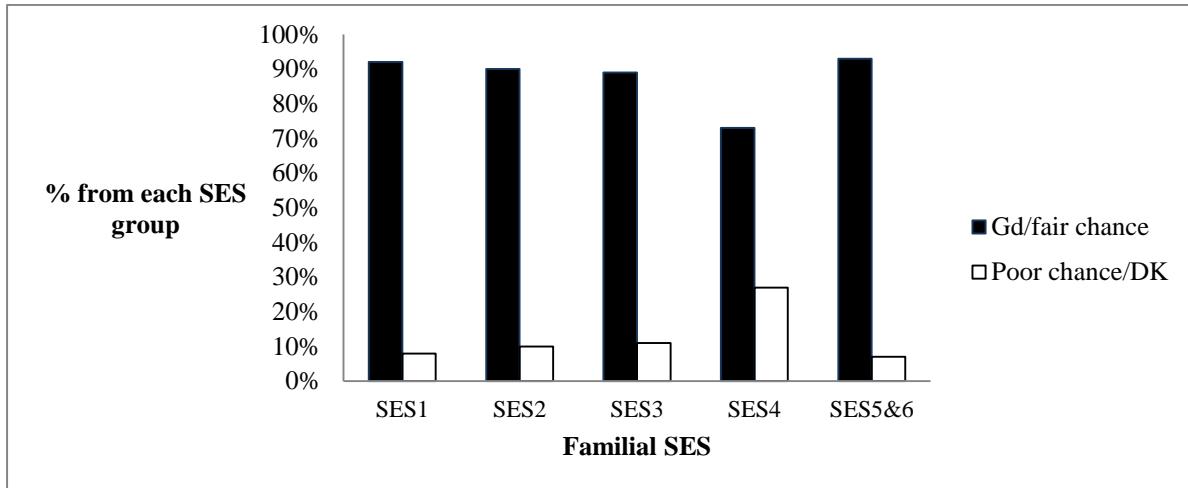


Figure 5.7. Perceived chance of obtaining managerial or professional job by familial SES.

Generally, *Pathways* teenagers aimed for professional occupations and most believed that they had at least a fair chance of obtaining the careers they aspired to. As already noted, researchers at the time voiced concern about this but below I show that the *Pathways* participants may not have been as unrealistic as assumed at the time.

Realistic Aspirations?

New Zealand census data suggests that perhaps these young people were not being as unrealistic in their aspirations as was suggested by the researchers at the time. In many ways their desired occupations reflected the nature of the workforce that they saw around them. Below is a chart of the 20 most widely held occupations in 1986 organised from the most common occupation (clerk) through to the twentieth most widely held occupation (orchard worker). The careers coloured lightly are the occupations which were also in the occupational choices chosen by at least five of the *Pathways* participants.³⁸ Those in the darker colour were chosen by less than five.

³⁸ Thirty three different jobs in total due to the same numbers of participants choosing several occupations.

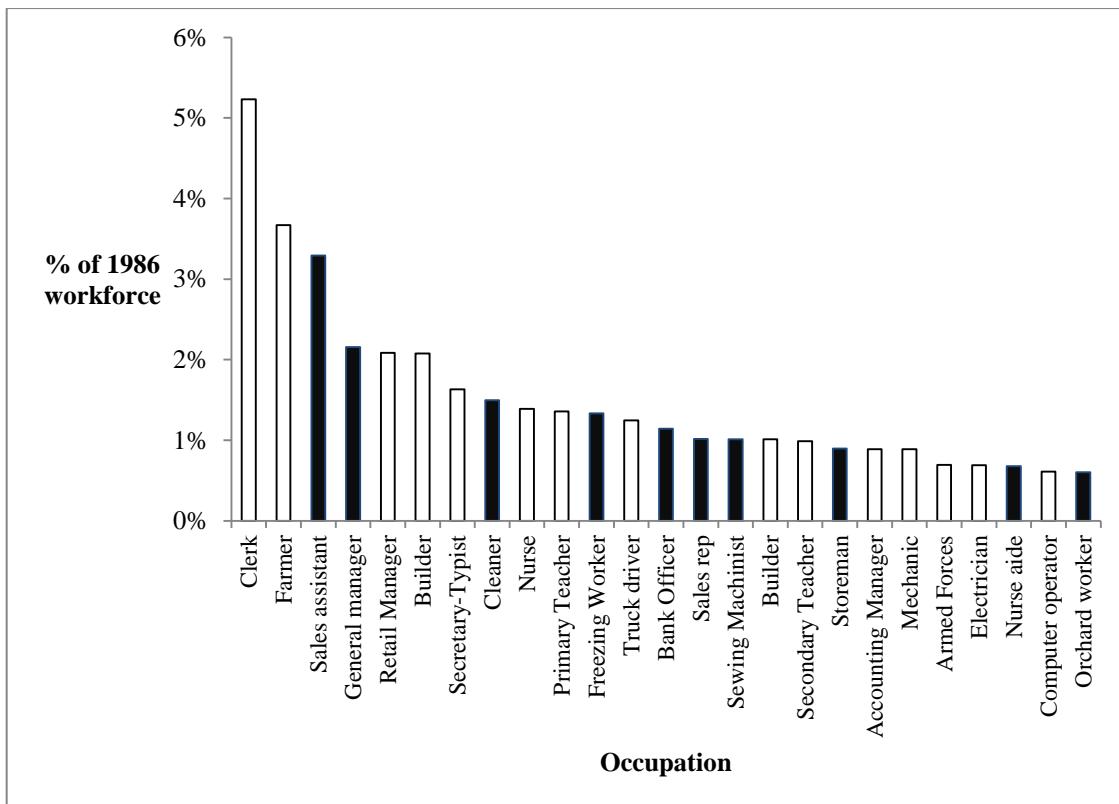


Figure 5.8. Most common occupations in New Zealand in 1986.

The grouping of the occupations and careers recorded in Figure 5.8 is from the 1986 New Zealand census, which varies in the codes of some occupations compared to the 1999 NZSCO occupational classifications used to code the *Pathways*' participants occupations (for example, the 1986 occupation 'secretary-typist' is coded as two separate occupations under NZSCO, 1999). Taking this into consideration, it is interesting to note that 15 of the occupations that five or more *Pathways* participants aspired to were within the 25 most common New Zealand occupations at the time.³⁹ It is noticeable that the most common occupations not aspired to by *Pathways* participants were from NZSCO categories eight and nine (with the exception of general manager, bank officer, and sales representative). These are freezing workers, cleaners, orchard workers, nurse aides, sewing machinists and storepeople.⁴⁰

³⁹ The occupations chosen by five or more participants that were not in the most common jobs in NZ in 1986 were: lawyer, pilot, vet, architect, chef, hairdresser, doctor, kindergarten teacher, police officer, animal worker, professional athlete, engineer, musician, designer, journalist, horse worker, travel agent and air hostess.

⁴⁰ One *Pathways* participants wanted to be a nurse aide but no-one else aspired to any of the rest of these occupations.

Thus, *Pathways* participants who did have an occupation in mind were likely to aspire to high level careers. They were relatively confident about their ability to obtain their desired occupation and overall they were slightly more confident if their desired occupation was at the professional level. However, the small numbers who had lower confidence in their ability to obtain their intended job means that it is important not to overemphasise this finding. Those from the lowest SES groups were less sure about their ability to obtain their future jobs but were more likely to not know their chances than believe that they had a poor chance. In the next section, I investigate whether gender was a factor in the participants' aspirations and confidence in their ability of obtaining desired careers.

Gendered Occupational Aspirations

Boys and girls aspired to a similar number of jobs. There were 77 different jobs (that could be coded) described by the 309 boys who chose a future occupation and 72 by the 313 girls. However the gendered nature of their chosen occupations varied considerably and the popularity of some careers was strongly differentiated by gender. Forty-two of the total 107 occupations were chosen by at least one boy and one girl, 35 were chosen by only boys and 30 by only girls. Figure 5.9 below shows the most popular jobs divided by gender. The most popular intended jobs were traditionally gendered⁴¹ and generally chosen by the gender associated with the occupation. Male choices predominated in the most popular seven jobs. The only exception was the intention to become a teacher, where girls greatly outnumbered boys. A number of girls were also aiming at being accountants (11 of 37), lawyers (14 of 33) and doctors (7 of 13), all traditionally masculine occupations on Pringle's (2010) list.

⁴¹ Occupations were coded as traditionally gendered if they were on Pringle's (2010) list or if 70% of the workers performing that occupation were female or 80% male. See Chapter 4 for more details.

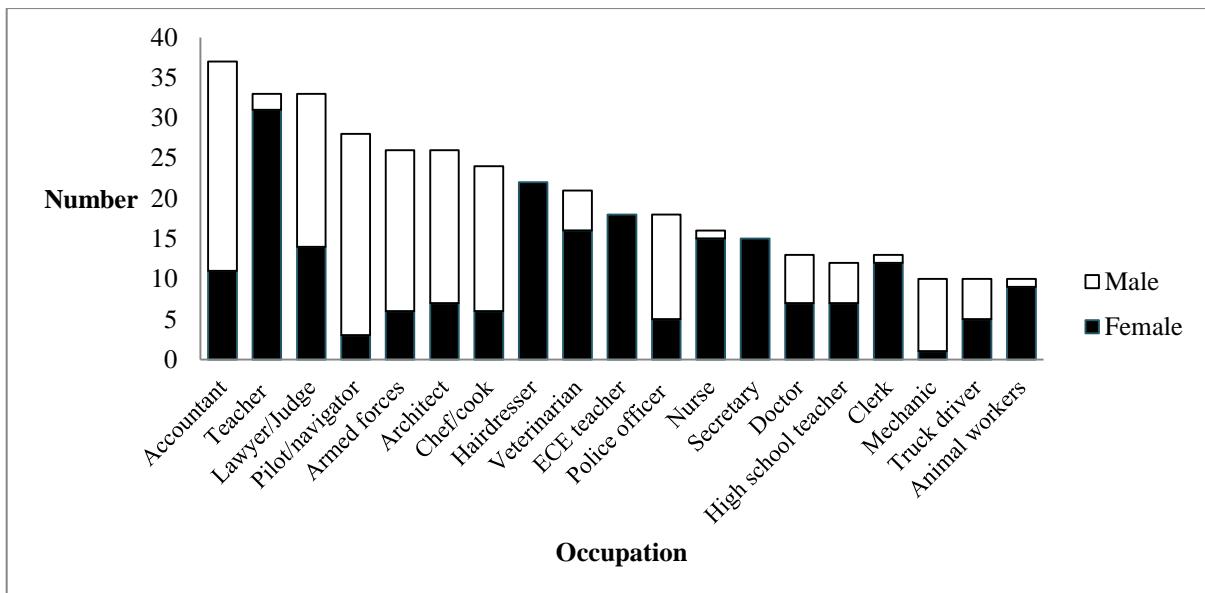


Figure 5.9. Most desired occupations for *Pathways* teens by gender.

The popular female-dominant careers, such as secretary, clerk, early childhood teacher and nurse were preferred by girls. Of the 58 people aspiring to these four careers, only four were male.⁴² Essentially, these are jobs that very few males wanted to do. The gender differences were even more distinct when the most popular choices for each gender are differentiated, as displayed in Figures 5.10 and 5.11. The only occupations that boys and girls share in the most popular ten are that of lawyer and accountant.

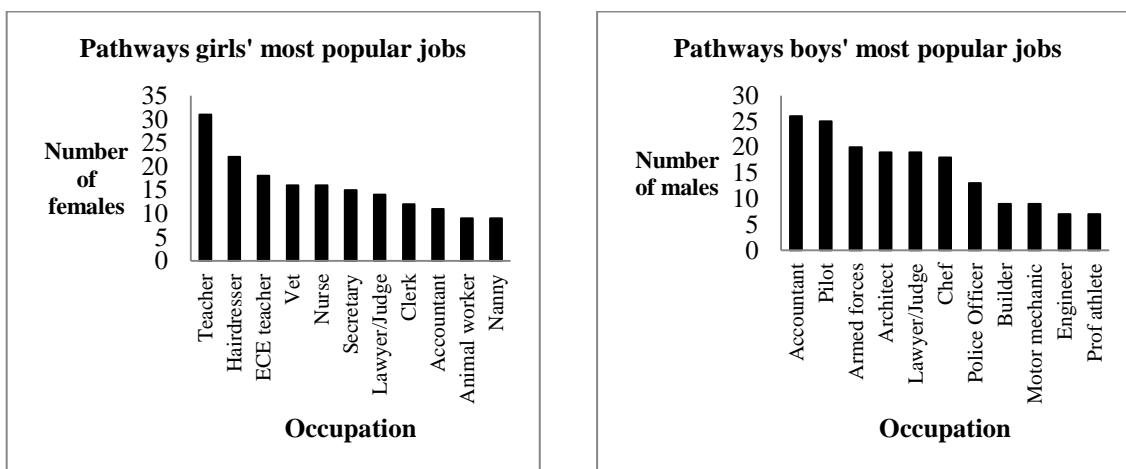


Figure 5.10. *Pathways* girls' most commonly preferred occupations.

Figure 5.11. *Pathways* boys' most commonly preferred occupations.

⁴² One young man wanted to be a nurse, two wanted to be teachers and another said he wanted to work in an office. Participants who said that they wanted to do office work were coded as office workers/clerks.

There was also a difference in the level of occupations that the *Pathways* girls and boys were attracted to. The largest NZSCO category of jobs chosen by both genders was that of professional but comparatively more girls were attracted to professional careers (138 of the total 313 girls compared to 106 of 309 boys). A chi square test for independence showed this difference to be significant, $X^2(2) = 6.2$, $p = 0.01$. More girls were also interested in clerical occupations (33 girls and only three boys) while more boys than girls were keen on trades (37 boys and five girls) and in technical and associated professional careers (70 boys and 49 girls). This was also a significant difference, $X^2(2) = 4.9$, $p = 0.03$. The gender difference in the NZSCO technical category was largely accounted for by boys who wanted to be computer technicians, professional athletes and the larger number of boys than girls who hoped to become pilots. Figure 5.12 shows the percentages of girls' and boys' job choices at each NZSCO level.

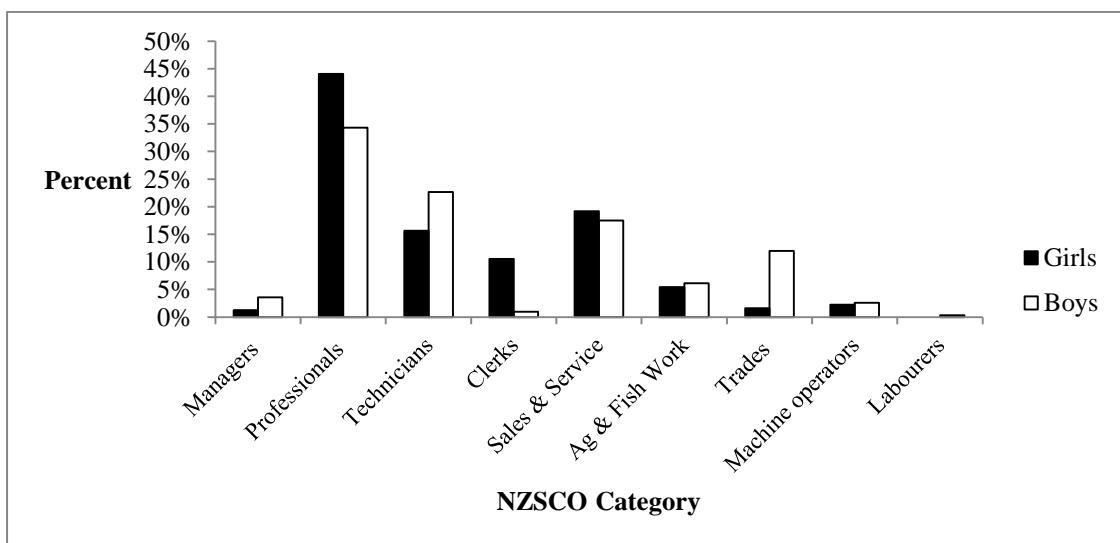


Figure 5.12. NZSCO level occupations for boys and girls.

This difference did not appear to be explained by familial SES. There was no significant difference in the SES of girls and boys aspiring to managerial, professional and technical occupations, $t(375) = 0.41$, $p=0.68$ (Mean SES for both genders was 2.9) nor between the familial SES of girls and boys aspiring to other occupations, $t(242) = 0.43$, $p=0.67$ (girls' average SES 3.7, boys 3.6).

In order to further examine gendered career aspirations, it was important to identify occupations that are traditionally dominated by males and females. To be considered male dominant, occupations were required to be on Pringle et al's (2010) list of 30

traditionally male occupations. Occupations not on the list were considered male-dominant if 80% of the workers who were employed in that occupation were male. Occupations were considered to be female dominant if they were on Pringle et al's (2010) list of traditionally female occupations or if 70% of workers in 1986 were female⁴³ according to the 1986 New Zealand census (Statistics New Zealand, 2012). Sixty-six of the *Pathways* occupations were coded as male dominant, 21 as female dominant and 20 jobs were neither male nor female dominant.

Nearly two-thirds of the 107 occupations that *Pathways* participants sought as their adult occupations were male dominant. These jobs came from across the socio-economic spectrum, as Figure 5.13 below shows. Participants were interested in male-dominant occupations from every NZSCO category except that of clerks. Conversely female and non-gendered desired occupations came from within only four NZSCO categories each. The 21 female dominant occupations described as desired occupations by *Pathways* participants were professional occupations (such as teacher and nurse), technicians (such as physiotherapist and social worker), clerks (secretaries and office workers), and sales and service workers (such as hairdressers and nannies). The 20 occupations that were neither male nor female dominant also came from the professional category (secondary school teachers⁴⁴ and pharmacists) and included eleven occupations from the NZSCO technician and associate professionals category. These were largely creative occupations such as artists, designers, musicians and photographers. There were four people who hoped to do horticultural and animal welfare jobs which were considered non-gendered occupations and were within the NZSCO group of Agricultural and Fisheries. There was also one gender neutral occupation from the machine operator category.⁴⁵

⁴³ Chapter 4 and Appendix 7 provide a detailed description of the process of assigning a gender dominance allocation to the jobs described by *Pathways* participants. See Appendix 7 for full list of all *Pathways* gendered occupations.

⁴⁴ Unlike primary teaching, secondary teaching was not female dominant. It also did not meet the criteria to be considered male dominant.

⁴⁵ This person wanted to be a food decorator, which came under the job code "Other bakers, pastrycooks and confectionery makers".

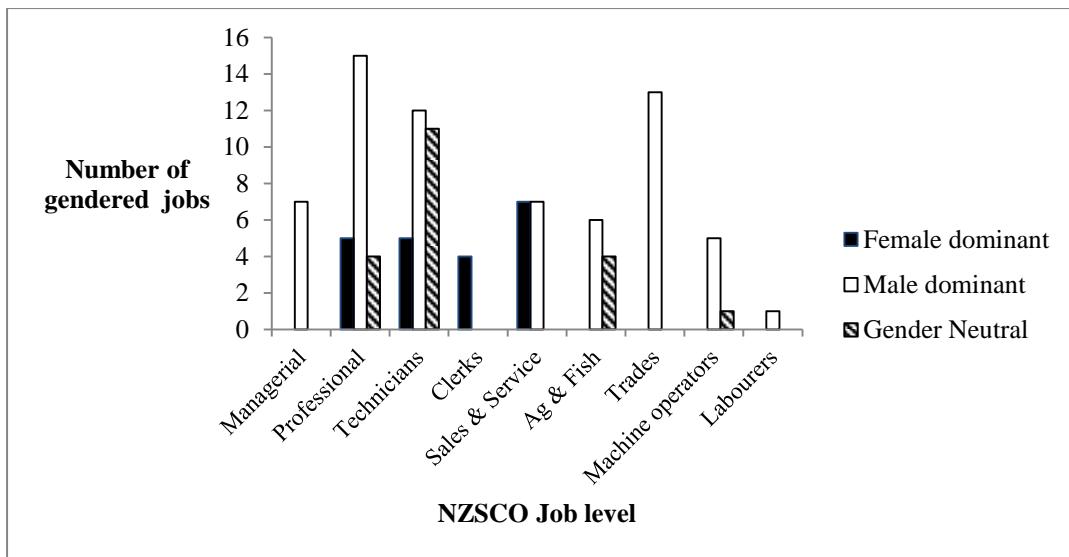


Figure 5.13. NZSCO categories of the gendered occupations chosen by *Pathways* participants.

Part of the explanation for the predominance of ‘male’ occupations in the jobs that *Pathways* participants aspired to is that there *are* more occupations that are primarily done by men. This is especially true of the trades, which are particularly dominated by males (Fuller, Beck, & Unwin, 2005; Murray, 2004a). This was seen in the *Pathways* data: Twenty percent ($n=13$) of the male-dominant jobs were trade occupations. It is also the case that women are employed in fewer different occupations. In 2006 33% of the female New Zealand workforce was employed in only 10 (out 550) occupations (Ministry of Women's Affairs, 2008). The *Pathways* teenage girls in 1986 not only aspired to a greater range of gendered occupations than the *Pathways* boys but also to a greater range than adult women are currently employed to do in the workforce.

Under 40% (42 of 107 total occupations) of *Pathways* participants’ desired jobs were chosen by people of both genders. Part of the explanation for this gender differentiation is that a relatively high number of occupations (35) were described by only one participant. The other reason is indicated in Figure 5.14 and 5.15 below; generally *Pathways* boys aspired to adult occupations that are predominantly performed by men.

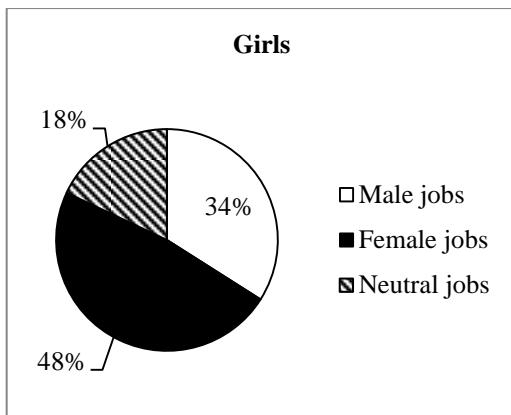


Figure 5.14. Pathways girls' gendered occupations.

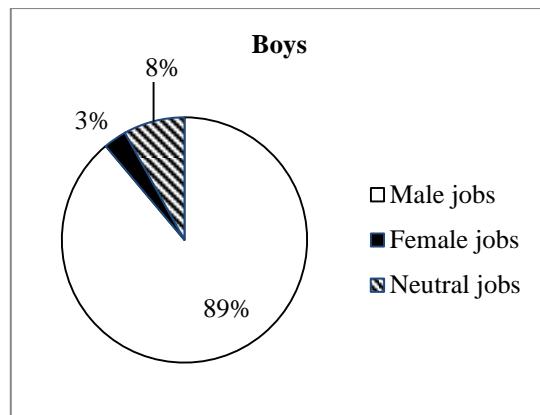


Figure 5.15. Pathways boys' gendered occupations.

Nearly half the girls were interested in pursuing female dominant occupations but a greater percentage of girls were interested in male occupations than boys were in female dominant occupations. Nearly all (89%)⁴⁶ of boys aspired to a job traditionally done mostly by men. Boys showed a much stronger preference for male-dominated occupations and only nine boys expressed an interest in pursuing occupations usually performed by women. These jobs were being a physiotherapist (2 boys), cashier (2 boys) wanted to work in banks), a nurse, a computer operator and a clerk. Two boys also expressed a desire to be teachers, which has been coded as primary school teacher, a female dominated career.⁴⁷ However, it is possible that these boys meant secondary school teachers, which is a gender neutral occupation. Likewise, the boy who aspired to be a computer operator, which is on Pringle et al's (2010) list as a traditionally female occupation, may well have envisaged his future occupation as a computer technician (a male dominant occupation) rather than a keyboard operator. If these aspiring teachers and computer operator had intended other aspects of their aspired career, only six boys would have sought female-dominant careers.

The familial SES of the girls who aspired to non-female dominant occupations (either male-dominant or gender neutral) was significantly different from the girls who aspired to female occupations $t(310) = 3.81$, $p < 0.00$ (means of 3.0 and 3.4 respectively). The groups also had significantly different IQs, $t(301) = 5.6$, $p < 0.00$ (mean of 110 for girls who aspired to male-dominant compared to 102 for girls who aspired to female-dominant

⁴⁶ 273 of 309 boys.

⁴⁷ As already noted, a decision was made to code the generic term 'teacher' as 'primary school teacher' because it seemed that those aspiring to careers as secondary teachers described the subject they hoped to teach.

occupations).⁴⁸ This is probably explained by girls with non-female aspirations having higher NZSCO level aspirations, reflecting the nature of gendered work: many of the higher level occupations were male-dominant. The girls who were interested in pursuing traditionally male occupations, were mostly interested in a relatively small number of these jobs. Girls aspired to 33 and boys to 57 different male-dominant occupations. As shown in Figure 5.14 below, girls primarily chose professional male-dominant jobs while boys' male-dominant choices were from across the NZSCO spectrum. Fifty-eight percent ($61/106$) of the girls who chose male dominant occupations wanted to work in jobs coded at the NZSCO professional level and the most five most popular male dominant occupations chosen by girls were all professional occupations.⁴⁹ These were: veterinarian (n=16), lawyer (n=14), accountant (n=11), architect and doctor (seven girls aspired to each of these careers).

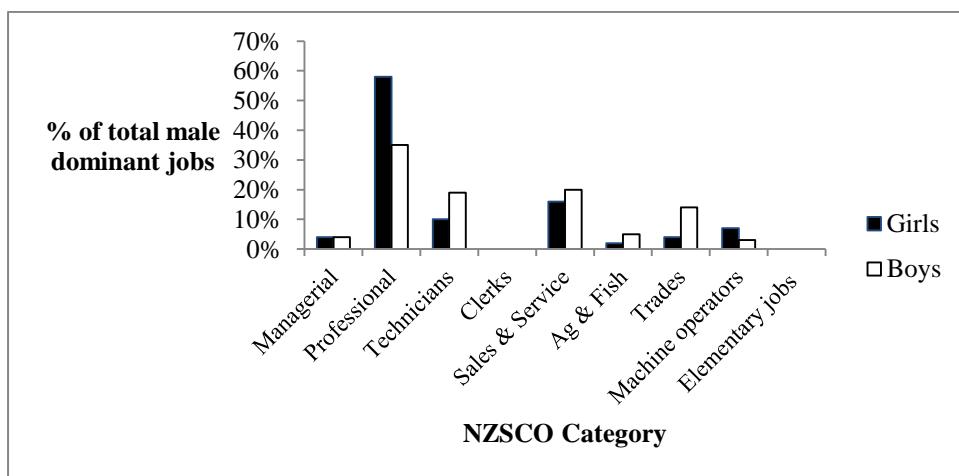


Figure 5.16. NZSCO categories of male dominant jobs for girls and boys.

Sixty girls hoped to get work in sales and service jobs that were male-dominant. The most popular were going into the armed forces (6 girls) or police and becoming a chef (both 5). Only four girls hoped to get a trade (an aspiring mechanic, toolmaker, cabinet maker and signwriter) while 37 boys intended to work in one of 12 different trades. Interestingly a larger percentage of girls than boys aspired to become machine operators. For both genders, this group was dominated by people (5 boys and 5 girls) who hoped to become truck drivers.

⁴⁸ Ten girls did not have full IQ data and one did not have full SES data so these participants are not included in these analyses.

⁴⁹ It is important to remember that the gender dominance of these occupations is from the era that the *Pathways* data was collected. Some of these gendered occupations are no longer male-dominant.

As already noted, the majority of *Pathways* participants believed that they had a good or fair chance of achieving their desired career. However, girls were significantly less likely to believe that they had a good or fair chance of obtaining a male-dominant occupation than boys were, $\chi^2(1, N=470)=179.4$, $p<0.00$. Only 27% ($29/106$) of girls aspiring to male-dominant occupations thought that they had a good chance of getting that job compared to 40% ($108/273$) of boys. It seems that the girls perceived that it might be more difficult for them to obtain a career in a male-dominant field than boys thought it would be.

Because of the low numbers of boys who aspired to non-male dominant occupations it is difficult to compare boys' and girls' belief in their ability to obtain these jobs.⁵⁰ However, it was possible to compare the belief of girls aspiring to male dominant occupations to the girls aspiring to female dominant occupations. A greater percentage of girls aspiring to female occupations believed that they had a good chance of getting the job than those aspiring to male careers (38%, $57/151$ compared to 27%, $20/106$). However, the difference between the confidence of the girls who aspire to male and female occupations was not significant, $\chi^2(1, N=123)=3.40$, $p=0.66$. It is important to note, that the difference between the confidence in obtaining their desired job of the two groups of girls (male and female aspiring) was not due to a difference in the number who thought that they had a poor chance or did not know their chance of getting their job choice.⁵¹ The difference was that more girls (55%, $58/106$) aspiring to male occupations thought that they had a fair chance of getting their desired job. It seems that girls aspiring to traditionally male occupations thought it could be more difficult to get their desired job compared with boys and also thought that it would be slightly more difficult to obtain these jobs than the girls who aspired to traditionally female jobs.

In general boys and girls aspired to different types of jobs although the majority of both genders were interested in professional occupations. Both genders believed that they had a good chance of getting their desired occupation but girls were less confident in their ability to obtain their desired occupation if it was traditionally male.

⁵⁰ The numbers of boys aspiring to traditionally female careers was too small to conduct a chi square test for independence for their perceived chance of obtaining the career. However, all 9 boys who hoped to work in female-dominant areas thought that they had a good (2 boys) or fair chance (7 boys) of getting their desired job.

⁵¹ 19% of girls aspiring to male occupations and 18% of girls aspiring to female occupations thought that they had a poor chance or did not know their chance of getting their chosen job.

Discussion

One quarter of the 878 *Pathways Project* participants did not have a specific occupation in mind at age 14 or 15. Overall these young people did not differ by familial SES or IQ from their peers with a teen career choice. Both groups contained equal numbers of boys and girls. Evidence suggests that many young people make vocational decisions at a relatively young age and that early decision-making can influence occupational outcomes (Hartung, et al., 2005; Schoon & Polek, 2011). However, it is important to remember that the *Pathways* participants were asked if they hoped to get a *particular* job and it is likely that at least some of the teens who answered ‘no’ to this question had some general ideas about their vocational futures. Not having a ‘particular job’ in mind does not necessarily equate with absolutely no vocational ideas or plans. However, in the next chapter we see that not having specific teenage occupational aspirations does seem to impact on adult occupational outcomes.

The 656 *Pathways* participants with a specific (codable) career in mind chose 107 different occupations. This was a small number of all the potential occupations available at the time. In the 1986 New Zealand census recorded 1116 different NZSCO coded occupations (Statistics New Zealand, 2012). The majority of *Pathways* participants were interested in an even smaller number of jobs, most of which were professional occupations. Seventy two percent of *Pathways* participants aspired to 33 jobs with the remaining 182 participants choosing 74 different occupations.

The relatively small number of occupations recorded by the *Pathways* participants may reflect a lack of knowledge about the range of different occupations available at that time. Career guidance was in its infancy in New Zealand in 1986 and those schools with careers advice focused their attention at the senior school. The *Pathways* participants were in only the second year of high school (now known as year 10) so would have had little formal knowledge of different occupations. Adequate knowledge about occupations and their educational pre-requisites required may influence young people’s ability to fulfil their occupational dreams, and this seems to be particularly true for girls aspiring to ‘non-female occupations’ (Ceci & Williams, 2011; Schoon, 2001; Wright, 2005).

Many of the occupations categorised as ‘professional’ by the NZSCO system are quite high profile careers that the teenagers would be aware of. This category includes

accountants and lawyers (the two most popular jobs), teachers, doctors, architects and veterinarians. All of these careers tend to be well-known. Several of the careers aspired to by *Pathways* participants were among the list of the most common occupations in New Zealand in 1986. To some extent the occupations that the *Pathways* participants sought *were* the occupations that they saw around them.

However, the most common occupations at the time that were *not* aspired to by *Pathways* participants were jobs from lower level occupational codes, such as freezing workers and cleaners. This suggests that the desire for higher status and income cannot be ignored as a potential reason for aspiring to these careers. The *Pathways Project* was centred in Dunedin, a city where one of the largest employers is a university and the participants' families had an average SES slightly higher than New Zealand's average. Familial SES was a factor in aspirations despite professional occupations being the most desired across all SES groups. A greater proportion of participants from families with lower SES aspired to lower level occupations.

Nearly all the participants believed that they had at least a fair chance of obtaining their chosen occupation. The exception was the small number who wanted work in areas with lower NZSCO coded occupations (such as drivers, tradespeople and clerks). There appeared to be a tendency to have more confidence about the potential to obtain higher level occupations. People from the lower socio-economic groups were also less likely to know their chances of obtaining their desired occupation. This suggests that those from lower socio-economic groups may be disadvantaged by a lack of information about future occupations, which may impact on the choices available to them.

It is also possible that the *Pathways* participants' higher level aspirations reflected the changing society that they saw around them. As described in the introduction, New Zealand went through major economic reconstruction in the 1980s. This had a major impact on manufacturing and primary industries, including farming. In the 1980s large numbers of employees were made redundant from the civil service and primary production sectors. Changes made to apprenticeship training schemes saw them become primarily the responsibility of private industries, many of which were ailing (Murray, 2004b). Perhaps the *Pathways* participants' professional and technical aspirations were a result of an awareness of dwindling 'traditional' sources of employment.

One of the most noticeable features of the *Pathways* data was the gendered difference in aspirations. Girls and boys generally aspired to different types of jobs. Very few boys hoped to get work in areas that were not traditionally male. Like the girls in other studies (Beck, et al., 2006b; Francis, 2002; P. McDonald, et al., 2011; Pringle, et al., 2010), the *Pathways* girls were more likely than the boys to consider a job usually done by the opposite sex. Perhaps this reflects the changing times, where girls were starting to see a wider range of occupations being performed by women and young women's ambitions were changing and rising (McLeod & Yates, 1998; Tinklin, et al., 2005). For example, by 1986 over a third of pharmacists and 20% of doctors were women (Statistics New Zealand, 2012). However, the group of *Pathways* girls with non-traditional aspirations had a higher average IQ and aspired to only a small number and type of traditionally 'male' occupations. They wanted to be doctors, lawyers, accountants and a few were interested in the armed forces or becoming police officers. Only four girls aspired to trades. This also reflects the times: despite several positive action initiatives only 2% of apprentices were women in the decade after 1972 (Murray, 2004b). So, while it seems that the "Girls can do Anything" marketing campaign may have had an impact on the aspirations of young women, it only encouraged the professional aspirations of a minority.

It is also important not to overstate these apparent gendered changes. The girls who aspired to 'male' occupations were less convinced of their ability to get their desired occupation than the girls aspiring to 'female' occupations and the boys. It is also important to remember that nearly half of the *Pathways* girls still aspired to female-dominant occupations. And, like other studies (Francis, 2002; Miller & Budd, 1999) the vast majority of *Pathways* boys' aspirations remained traditionally gendered.

When reflecting on these results, however, it is important to maintain a critical stance. It must be remembered that this is historical data, which required interpretation at times (for example, the coding of the occupation 'teacher' as already described). There were also 34 participants who had occupations in mind but their occupations were unable to be coded. The classification required with such a large dataset can lead to exclusion of some data and generalisation.

Conclusion

Three quarters of the *Pathways* participants had specific occupations in mind when they were in their mid-teens. They were likely to have high aspirations across a relatively small range of occupations, which most were confident that they would reach. Boys maintained traditionally gendered vocational aspirations while more girls were liberal in their choices. Young people from families with fewer resources were less likely to be sure about their ability to fulfil their ambitions. In the next chapter I investigate how these aspects of aspirations correspond to the *Pathways* participants' adult occupations.

Chapter 6

A Comparison of Teen Aspirations and Adult Work

This chapter focuses on the *Dunedin Study* members' adult paid work and compares it to their teenage vocational aspirations. The *Pathways* participants from 1986 continued to be assessed regularly as part of their involvement in the longitudinal *Dunedin Study* and in 2004/5 they attended phase 32 of the Study. At this phase the 878 people who had participated in the *Pathways to Employment Project* as teens, provided information on their adult employment.

The initial investigation of the *Dunedin Study* members' occupations at age 32 revealed that 8% (n=69) were not in paid work at age 32. The majority of these people were women (n=65), and most identified as being in unpaid caring roles with young children. As the focus of this project was on the paid work of the participants, rather than excluding this group from the analysis, it was decided to include their age 26 employment data.⁵² Fifty-one women and two men who did not have age 32 occupations had codable occupations at age 26. The women who were in paid work at age 26 but not 32 were comparatively under-represented in the professional and technician level occupations compared to the women who were in paid work at 32. A greater proportion of the women who were in unpaid work at age 32 were employed in occupations from the NZSCO elementary, clerical and service and sales categories at age 26.⁵³ This meant that the inclusion of age 26 data for these participants was able to indicate a better representation of adult females' employment.

Only 14 people (13 women) reported having no paid work at either age 26 or 32. Two others (one man and one woman) reported work that was uncodable (illegal). Those 16 individuals were excluded from the comparison of *Pathways* aspirations and *Dunedin*

⁵² The previous *Dunedin Study* assessment was at age 26 so this was the most recent available data.

⁵³ Twenty-seven percent (102/371) of the women whose age 32 occupations were used in the analysis worked in professional occupations and 10% (5/50) of the working women whose age 26 occupations were used had professional occupations. The percentages for occupations in the technician category were 18% (65/371) of the 32 year-old workers and 8% (4/50) of the 26 year-old workers. Eighteen percent (66/371) of the 32 year-old women workers were employed in clerical occupations compared to 26% (13/50) of the 26 year-olds. The proportions were 15% (57/371) and 28% (14/50) respectively for sales and service workers and 2% (9/371) and 12% (6/50) for elementary occupations. When comparing these proportions, it must be remembered that there was a total number of 371 women who had paid employment at 32 and only 50 women who were in paid work at age 26 but not 32.

Study adult employment. This left a sub-sample of 862 people (421 women and 441 men) with codable occupations at either age 26 or 32. The occupations of these people at these ages are described as ‘adult occupations’ in this chapter. Table 6-1 shows the composition of the adult occupation numbers.

Table 6.1. *Numbers of participants with and without paid occupations at ages 32 and 26*

	Total sample	Had paid occupation at 32	Paid occupation at 26 but not 32	No paid occupation at 26 or 32	Had occupation at 26 or 32
Females	435	370	51	14	421
Males	443	439	2	2	441
Total	878	809	53	16	862

This meant that when comparing *Dunedin Study* adult occupations with teen aspirations the analysis was limited to these 862 people. However, for other analyses it was important to include all eligible participants, so that participants’ life choices and/or circumstances (for example, having children or disabilities) and/or the codability of their teenage aspiration did not exclude them from the analysis. All available data were used for each analysis but because some participants had no teen aspiration or their aspiration was uncodable the numbers in analyses vary.⁵⁴ The number of participants in each analysis is made explicit in the results section. Table 6-2 below shows the numbers available for comparing teen aspirations and adult occupations.

⁵⁴ Nineteen participants did not have full childhood IQ data and two did not have full childhood SES data so these people were excluded from analyses requiring this data but included in all others.

Table 6.2. *Pathways and Dunedin Study participant numbers for comparative analyses*

Entire sample 878					
Have specific teen aspiration			No specific teen aspiration		
656			222		
Aspirations codable with NZSCO		Aspirations not codable with NZSCO			
622		34			
Dunedin Study Adult occupation	No DS adult occupation	Dunedin Study Adult occupation	No DS adult occupation	Dunedin Study Adult occupation	No DS adult occupation
613	9	33	1	216	6
Sub-sample with Dunedin Study Adult⁵⁵ occupations 862					

Results

Firstly I give an overview of the entire cohort's adult occupations compared to the teen aspirations, but as Table 6-2 above indicates, the numbers in each age group for this comparison differ with only 622 teenagers with codable aspirations but 862 adults with codable occupations.⁵⁶ Following the overall comparison is the more specific comparison between aspirations and occupations. I investigate the adult outcomes of those with and without teenage aspirations followed by a comparison of teenage aspirations and adult occupations to explore which teenagers were more likely to obtain their desired occupations. The results section concludes with a comparison of the teens' gendered desired and adult actual jobs before a brief discussion about the implications of these results.

Comparing Teen Aspirations and Adult Occupations

To give an overview of the difference in teen aspirations and adult occupations I have compared the full cohorts to briefly describe their particular traits, firstly at NZSCO

⁵⁵ This refers to age 32 occupations except for those 53 participants who had no age 32 occupations but did have a paid occupation at age 26.

⁵⁶ In reviewing this overall comparison it is also important to remember that the individuals in each group are not necessarily the same people ie it is a comparison of proportions of each cohort at the NZSCO levels of category and occupation.

category level and then a comparison at the level of occupation. Figure 6.1, below, shows that teenage aspirations were dominated by a desire for occupations at the professional level. Thirty-nine per cent ($^{244}/_{622}$) of the *Pathways* teenagers aspired to professional careers but only 22% ($^{189}/_{862}$) of the *Dunedin Study* members worked in professional careers as adults. However, of all of the NZSCO classifications, the professional category was the largest for both teenagers and adults.

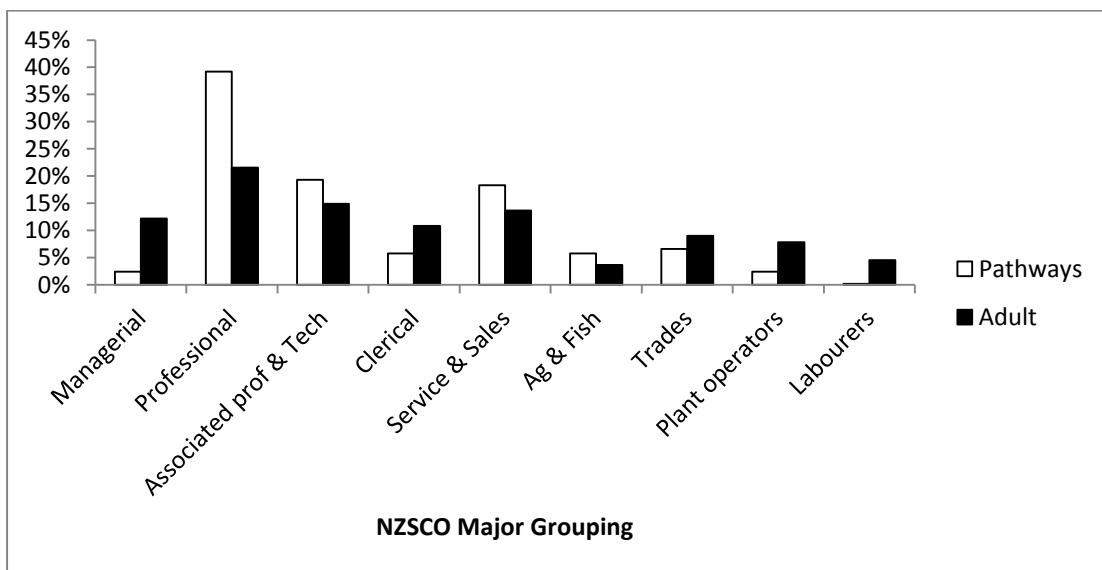


Figure 6.1. Percentages of Pathways teens' aspirations and Dunedin Study adults' occupations across NZSCO categories.

Along with the decrease in the percentage of workers in the professional category there was a corresponding increase in the NZSCO managerial category. Only 2% ($^{15}/_{622}$) of teenagers anticipated a managerial career while 12% ($^{107}/_{862}$) of *Dunedin Study* adults worked as managers. The three NZSCO groups with occupations requiring a tertiary qualification (managerial, professional, and technical and associated professional) were combined and compared with the remaining six occupational groupings. Sixty-one per cent ($^{379}/_{622}$) of teens aspired to occupations in the managerial/professional groups. Under half ($^{427}/_{862}$) of the adults worked in occupations categorised as managerial/professional. Thus, the higher proportion of adults working in management compared to teens aspiring to be managers did not entirely account for the reduction in the proportion of adults working as professionals compared to the teens' professional aspirations.

Although *Pathways* males and females had similar percentages who aspired to specific occupations (76% of females and 74% of males aspired to a specific occupation) some of

the percentage changes between teen aspirations and adult occupations were because of changes in differences by gender. Table 6-3 below shows the difference of teen and adult aspirations and occupations by gender. The proportions of males dropped from 23% ($^{70}/_{310}$ boys) hoping to work in ‘associated professions and technical’ positions to 14% ($^{62}/_{441}$) employed in these occupations and from 17% ($^{54}/_{310}$) of boys aspiring to service and sales occupations to 11% ($^{49}/_{441}$) of men working in them. The percentage of females in these categories remained fairly stable: 16% ($^{50}/_{312}$) of girls aspired to and 16% ($^{69}/_{421}$) of women worked as ‘associated professionals and technicians’ and 19% ($^{60}/_{312}$) of girls aspired to work in the service and sales industries and 17% ($^{71}/_{421}$) of women worked in service and sales occupations. The major increase for females was in the clerical group. Nearly a fifth of women ($^{79}/_{421}$) worked in clerical jobs while only 11% ($^{33}/_{312}$) had aspired to such careers as teenagers. Males had slight proportional increases in clerical, agriculture and fisheries, and trade categories but larger increases in unskilled and semi-skilled work. Very few boys ($^9/_{310}$) had aspired to work in elementary occupations and as plant operators but 18% ($^{80}/_{441}$) of men were employed in positions in these categories. Seven per cent ($^{29}/_{421}$) of women worked in occupations in these areas while only 2% ($^7/_{312}$) of girls had aspired to work as plant operators and no girls wanted elementary occupations.

Table 6.3. *Percentages of Pathways teens and Dunedin Study adults in NZSCO categories by gender*

NZSCO Category	Pathways girls	Women age 32	Pathways boys	Men age 32
Administrators & managers	1%	12%	4%	13%
Professionals	44%	25%	35%	19%
Technicians & associate professionals	16%	16%	23%	14%
Clerks	11%	19%	1%	4%
Service and sales workers	19%	17%	17%	11%
Ag & Fisheries workers	5%	3%	6%	5%
Trades workers	1%	1%	12%	16%
Plant & machine operators	2%	3%	3%	12%
Elementary occupations	0%	4%	0%	6%

Both genders had aspired to higher level occupations: 61% ($^{188}/_{310}$) of boys and 61% ($^{191}/_{312}$) of girls aspired to occupations that were managerial/professional. However, as adults a greater percentage of women (53%, $^{225}/_{421}$) compared to men (46%, $^{202}/_{441}$) worked in careers that were managerial or professional. A chi square test for

independence showed that *Dunedin Study* women were significantly more likely to work in managerial or professional occupations than men, $\chi^2(1, N=862)=5.03$, $p=0.03$. The gendered division of the NZSCO categories is presented in Figure 6.2, below. It is apparent that occupations in the lower level NZSCO categories were dominated by males while clerical occupations were performed primarily by women.

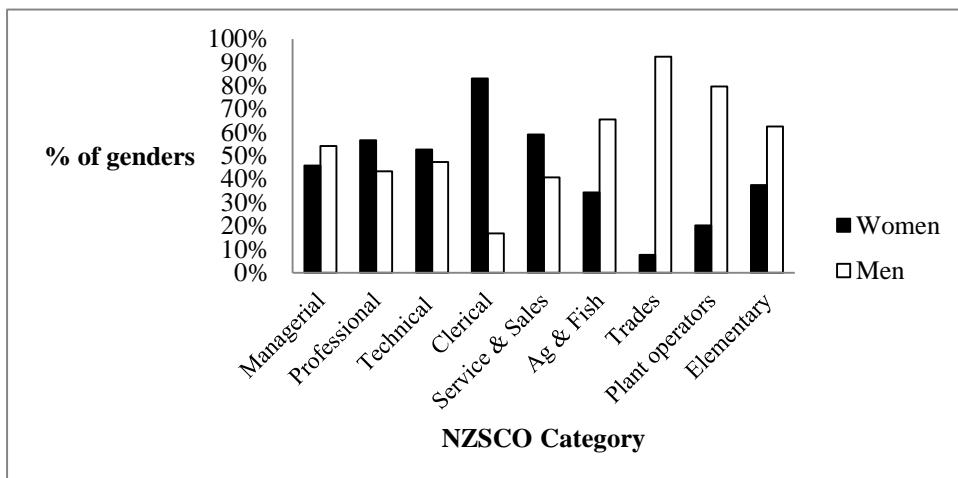


Figure 6.2. Percentages of men and women working in occupations in each NZSCO category.⁵⁷

Analysis at the NZSCO occupational level shows that specific teenage aspirations and actual adult jobs differed substantially. Only two occupations (lawyer and teacher)⁵⁸ are on both lists of the *Pathways* participants' ten most aspired occupations and the ten most common adult jobs. Table 6-4 below shows the difference between the *Pathways* cohort's most commonly desired occupations and the *Dunedin Study* members' most commonly performed occupations. The left side of the table has the occupations that the most *Pathways* participants aspired to and the number of *Dunedin Study* adults performing that work. The right half of the table has the most common adult occupations and the number of teenagers who hoped to do this career. It is important to remember that these are not necessarily the same people and, as with the previous table (Table 6-3), the total number of *Pathways* participants with aspirations was 622 and the number of *Dunedin Study* adults in paid work was 862.

⁵⁷ Because there are the same numbers of individuals who aspire to or are employed in some occupations, the most popular ten occupations actually include eleven occupations that were aspired to by *Pathways* participants and twelve adult occupations.

⁵⁸ As already acknowledged in Chapter Five, there are challenges with the *Pathways* category 'teacher' (which was coded as a primary school teacher if they did not describe the age of the students they hoped to teach). *Dunedin Study* adult teachers were able to be coded according to the sector they taught in.

Table 6.4: *Most common Pathways teen occupational preferences and Dunedin Study adult occupations*

Most commonly aspired Pathways Occupations			Most common Dunedin Study Adult occupations		
Aspired occupation	Number of Teens wanting to do job	Number of adults doing job	Actual occupation	Number of adults doing job	Number of Teens wanting to do job
Accountant	37	11	Sales assistant	39	2
Teacher (not secondary or ECE)	31	30	Primary teacher	20	14
Lawyer	32	13	Retail Manager	19	5
Pilot/navigator	28	1	Builder	18	18
Armed forces	26	3	Secretary	17	15
Architect	26	1	General clerk	15	13
Chef	23	7	Computer engineer/software developer	14	3
Hairdresser	22	7	Registered nurse	14	16
Veterinarian	21	1	Accounts clerk	14	1
Kindergarten teacher	18	9	Lawyer	13	32
Police officer	17	5	University lecturer/tutor	13	0
			Sales Representative	13	0

The *Pathways* teenagers aspired to 107 different occupations and, as the table above shows, relatively high numbers of teens aspired to some of these individual occupations. In contrast, the *Dunedin Study* adults were employed in 258 different occupations. This is not only a difference in the size of the two groups. The group of 622 people who had occupational aspirations as teens had more than twice the number of different occupations as adults than they had aspired to as teens. They were employed in 224 different occupations. There are thirty different occupations that six or more *Pathways* participants aspired to and forty three occupations done by six or more *Dunedin Study* members as adults. Six or more participants of both ages aspired to or worked in thirteen jobs that were the same. These are: accountant, lawyer, chef, hairdresser, ECE teacher, nurse, teacher, builder, childcare worker/nanny, secretary, clerk, mechanic and truck driver.

Table 6-4 shows that some occupations popular with a number of *Pathways* participants were not common occupations for adults and many of the common adult occupations did not feature in many teen aspirations. It is possible that some of the differences in the

number and type of aspired and actual occupations are at least partially explained by the coding system. Actual jobs were described in detail to get codes at the occupational level. Teens were more likely to give a general term or description of a desired occupation. For example, thirteen *Pathways* participants said that they wanted to work in an office or do clerical work. Their aspired work was coded as ‘general clerk’, while 45 adults worked in eight different specified clerical positions.⁵⁹ However, despite the coding difference and taking the difference in cohort size into consideration, there were still clear differences in the nature of occupations. A number of occupations performed by *Dunedin Study* member adults were not aspired to by any *Pathways* participants. These included occupations from across the occupational spectrum such as university lecturer or tutor, insurance representative, butcher, dietician, occupational therapist, coach builder, retail buyer, clown and greenkeeper. Many of the occupations performed by adult study participants that no teens aspired to were unskilled or semi-skilled work such as kitchenhand, warehouse packer, freezing worker, roofer and labourer. Not all of the people who worked in these types of jobs had intended to do so. Thirty-six percent ($^{39}/_{109}$) of those working in occupations coded in NZSCO groups 8 and 9 said that they were not working in the job they were trained to do.

It appears that the *Pathways* participants were less likely to state an interest in semi or unskilled work than were employed in such occupations as adults. Teens also chose their potential careers from a more limited range of occupations. It is important to remember that this comparison includes all *Dunedin Study* member workers, and a quarter of these people had recorded no specific desired occupation at age 15. There were also some occupations that were emerging or not available in 1986, such as property developer, massage therapist, gaming dealer and teachers’ aides. These are at least possible partial explanations for the differences in types of occupations but as we see later in the chapter, there were also differences when the comparison is made between only those with aspirations and their adult occupations.

Teen aspirations and adult occupations differed for both genders but particularly for males. The previous chapter describes how the aspirations of teenage girls and boys differed. *Dunedin Study* adult occupations were also highly gendered but were not

⁵⁹ Accounts clerk, credit clerk, dispatch clerk, general clerk, HR clerk, record and filing clerk, and stock clerk.

necessarily reflective of teenage aspirations. Table 6-5 below shows the occupations performed by seven or more women and men. The right hand column shows the number of *Pathways* participants who aspired to each occupation. Eight of the thirteen occupations that seven or more of the adult men do, were not desired occupations by any of the *Pathways* boys. Four of the twelve occupations employing seven or more women were not desired occupations by any of the *Pathways* girls.

Men's occupations were more likely to be in management and semi-skilled or unskilled work than the *Pathways* boys had aspired to. Women's adult work was more similar to their aspired occupations than men's but they also had some distinct differences. Clerical and management occupations were more commonly done by women than the *Pathways* girls had expected. No boys and only two girls anticipated working as a sales assistant. This was the most common adult job with 39 adults employed as sales assistants. Another six women worked as catering counter assistants and one as a checkout operator, other similar retail occupations.

Table 6.5. Most common Dunedin Study adult female and male occupations with Pathways teen aspiration numbers

Dunedin Study Women's Most Common Adult Work	Adult number	Pathways number	Dunedin Study Men's Most Common Adult Work	Adult number	Pathways number
Sales assistant	23	2	Sales assistant	16	0
Secretary	17	15	Computer engineer/software developer	11	0
Primary teacher	15	15	Builder	18	9
General clerk	14	10	General labourer	10	0
Registered nurse	13	15	Retail Manager	9	4
Accounts clerk	13	0	Lawyer	8	19
Retail Manager	10	1	Painter & decorator	8	0
ECE teacher	9	18	Slaughterer	8	0
Sales Representative	8	0	Tertiary lecturer/tutor	7	0
Childcare worker	8	9	Tavern/restaurant Manager	7	0
Accountant	7	11	Production manager	7	0
Administration officer	7	0	Heavy truck driver	7	5
Cleaner	7	0	Machinery mechanic	7	9

These tables also indicate the gendered nature of adult work, with only two occupations (sales assistant and retail manager) among the most common men's and women's occupations. The impact of gender on occupational choices is revisited later in the chapter.

Comparing the entire *Pathways* cohort's vocational aspirations with the *Dunedin Study* members' occupations showed that the *Dunedin Study* members were less likely to work in professional occupations than they had intended but they were more likely to be employed in management roles. More people worked in the lower level NZSCO occupations than had expected to. However, it is important to remember that this overall comparison is between the occupational aspirations of only those 75% of the *Pathways* participants who had specific aspirations and all the *Dunedin Study* members' adult occupations. Next I investigate the adult outcomes of those who had no specific aspirations compared to those who did have a specific teenage aspiration.

The Importance of Aspirations

Of the 220 *Pathways* participants who answered the question 'Do you hope to get a particular job?' in the negative, 216 (100 females and 116 males) had adult occupations that could be coded with NZSCO codes. There were 646 people (325 female, 321 male) who did hope to get a particular job as a teenager *and* had codable adult occupations. There were some significant differences in the adult occupational outcomes of these two groups.

Those with and without teen aspirations were compared to see if they were employed in different level adult occupations. Teens with aspirations for an adult career were more likely to work in managerial/professional occupations as adults than those who had no specific aspirations. A linear regression analysis showed that teenagers without a specific occupational aspiration were significantly more likely to be employed in lower level adult occupations (see Table 6-6 below). Table 6-6b below, shows that that even when adjusted for sex, childhood SES and IQ, having an occupational aspiration as a teenager was significantly associated with working in higher level occupations. There was no formal significant interaction between the genders in predicting adult occupational level by teen ambition. However, when analysed separately there was a significant association

for boys who had a teenage ambition and higher adult occupational level, $t(439)=2.3$, $p=0.02$ but there was little difference in adult occupational level between the girls with and without teen aspirations, $t(419)=0.6$, $p=0.49$.

Table 6.6. Association of Pathways teenage aspirations with level of Dunedin Study adult occupations (NZSCO levels 1-9)

6.6a. Unadjusted

Number of Observations = 862

Predictor	Coefficient	P value	95% Confidence Interval
No Pathways ambition	-.45	0.02	-.82 -.08

6.6b. Adjusted

Number⁶⁰ of Observations = 844

Predictor	Coefficient	P value	95% Confidence Interval
No Pathways ambition	-.42	0.01	-.75 -.09
Sex	1.06	0.00	.78 1.34
Childhood SES	.39	0.00	.25 .52
IQ	7.35	0.00	5.78 8.92

As already noted, NZSCO categories are not precisely ordinal so a dichotomous comparison was also made, comparing those with and without specific teen aspirations and their adult occupation (either managerial/professional or not). A chi square test for independence showed that teenagers without aspirations were significantly *less* likely to be employed in managerial/professional occupations as adults, $\chi^2 (1, N=862)= 5.56$, $p=0.02$, an effect limited only to those males with no teenage aspirations, $\chi^2 (1, N=441)=4.84$, $p=0.03$. Girls without aspirations were not significantly less likely to be employed in managerial or professional occupations, $\chi^2 (1, N=421)=1.04$, $p=0.31$.

The *level* of aspiration also appears to impact on adult occupational outcomes. Teenagers with managerial or professional aspirations were more likely to be employed in such occupations. Of the 613 people (304 women and 309 men) with a codable teen aspiration

⁶⁰ The numbers for analysis are reduced for the SES and IQ data due to a small number (19 IQ and 1 SES) of sample without full childhood SES and IQ data. This is the case for all analyses including these variables.

and an adult job⁶¹, 373 teens aspired to NZSCO coded managerial or professional careers and 240 aspired to occupations at the other levels. A chi square test for independence showed that those teenagers with managerial and professional aspirations were significantly more likely to be employed in such occupations as adults, χ^2 (1, N=613) = 83.3, p<0.01. A logistic regression showed a significant interaction between genders for the relationship between the level of aspirations and occupations, p (interaction) = 0.03. Having managerial or professional aspirations was significantly associated with adult work in a managerial or professional occupation for both genders (girls, OR= 2.9) but the association was particularly strong for males (OR= 8.9). Because of the significant interaction the results for males and females are presented separately in Table 6-7 below. A logistic regression was performed to assess the impact of SES and IQ alongside aspirations.⁶² Having specific teenage occupational aspirations was a predictive variable in explaining adult managerial/professional outcomes. As can be seen below, IQ appeared to be more predictive than SES for boys while girls' SES was comparatively more predictive of obtaining a managerial or professional occupation than that of boys.

Table 6.7. Association of Pathways teenage managerial/professional aspirations (Y/N) with Dunedin Study adult managerial/professional career by gender

Girls Number ⁶³ of Observations= 293				
Predictor	Odds Ratio	P value	95% Confidence Interval	
Teenage Professional Aspirations	1.76	0.04	1.03	3.01
IQ	1.05	0.00	1.02	1.07
Childhood SES	.79	0.09	.61	1.04

Boys Number ⁶⁴ of Observations= 305				
Predictor	Odds Ratio	P value	95% Confidence Interval	
Teenage Professional Aspirations	4.66	0.00	2.57	8.44
IQ	1.08	0.00	1.05	1.11
Childhood SES	.91	0.49	.69	1.19

⁶¹ Thirty four of the aspirations of the 656 *Pathways* participants with a specific job in mind were not able to be coded with NZSCO codes and nine *Pathways* participants with teen aspirations had no adult paid work at age 26 or 32. This meant that 613 individuals had full data for these analyses.

⁶² A logistic regression was used because the dependent variable (managerial/professional occupation or not) was dichotomous.

⁶³ Ten girls did not have full IQ data and one girl did not have full childhood SES data.

⁶⁴ Four boys did not have IQ data.

A linear regression was performed comparing the NZSCO codes of *Pathways* participants' occupational aspirations and *Dunedin Study* members' actual occupations (see Table 6-8 below). Those with higher *Pathways* occupational level aspirations were significantly ($p<0.00$) more likely to be employed in managerial and professional careers as adults. SES ($p< 0.00$) and IQ ($p<0.00$) were also significantly predictive.

Table 6.8. Association of *Pathways* teen ambition level with *Dunedin Study* adult occupation level (NZSCO levels 1-9)

6.8a. Unadjusted				
Number of observations= 613				
Predictor	Coefficient	P value	95% Confidence Interval	
Teen ambition level	0.48	0.000	.38	.57

6.8b. Adjusted				
Number ⁶⁵ of observations = 598				
Predictor	Coefficient	P value	95% Confidence Interval	
Teen ambition level	.28	0.00	.19	.38
Sex	.79	0.00	.47	1.11
IQ	-.05	0.00	-.06	-.03
Childhood SES	.28	0.001	.11	0.44

There was a significant interaction for the level of aspiration and occupation between genders, $p(\text{interaction}) < 0.01$. Table 6-9 shows the variation by gender. Childhood SES was slightly more predictive of obtaining an adult professional occupation for girls than boys. The level of ambition was more predictive for boys than it was for girls.

⁶⁵ Fourteen *Pathways* participants did not have IQ data and one did not have full familial SES data.

Table 6.9. Association of Pathways teen ambition level with Dunedin Study adult occupation level (NZSCO levels 1-9) by gender

Girls			
Number of observations = 293			
Predictor	Coefficient	P value	95% Confidence Interval
Pathways ambition level	.14	0.04	.01 .27
IQ	-.04	0.00	-.06 -.02
Childhood SES	.25	0.02	.04 .46

Boys			
Number of observations = 305			
Predictor	Coefficient	P value	95% Confidence Interval
Pathways ambition level	.37	0.00	.23 .51
IQ	-.05	0.00	-.07 -.03
Childhood SES	.31	0.02	.07 .55

In summary, having specific teen aspirations and the level of aspiration were predictors of adult occupational level even when adjustments are made for IQ and childhood SES. However, IQ and level of aspiration seem to have more significance for boys' chance of obtaining work in professional and managerial occupations while SES was a slightly greater factor for young women.

Who gets the adult occupation that they aspire to as a teen?

The analyses above show that there is a significant relationship between the level of aspiration and level of adult occupation for this cohort but do not investigate what makes it more likely that people will get the *actual* job that they aspired to as teenagers.

To assess the similarity of individuals' teenage aspirations and *Dunedin Study* adult occupations a direct comparison was made of *Pathways* participants' desired occupation/s with their actual occupation at age 32 (or 26 if they were not in paid employment at 32). Seventy-nine percent ($^{518}_{656}$) of *Pathways* participants with teenage aspirations gave two choices for their desired occupation and the comparison included both first and second choice for those who gave two. Second choices were included because it seemed likely that many people were contemplating more than one adult occupation⁶⁶ and at age 14 or

⁶⁶ Some participants wrote on the questionnaire form that they could not decide between the two occupations that they listed.

15 many would not be set on their first choice. Also, the numbers with the same or similar teen aspirations and adult occupations were relatively low so including second choices provided greater numbers to identify factors which might be associated with continuity between aspiration and occupation.

With this one to one (or two to one, for those with more than one choice) comparison, it was possible to include some participants whose *Pathways* teenage aspirations were not codable with the NZSCO codes. For example, someone who hoped to own their own business as a teen, which is unable to be coded with NZSCO because it is not specific enough, can be compared with their adult occupation to see whether they were, as an adult, owning a business. This very specific comparison provided data for all but 14 of the participants.⁶⁷

As detailed in Chapter Four, participants were grouped into one of four groups: exactly the same aspiration and occupation; aspiration and occupation at the same NZSCO level; similar aspiration and occupation and; aspiration and occupation nothing alike. If either of the teens' desired occupations was similar in any logical way, they were included in the 'similar' category. This included such things as indicating a desire for outdoor work, work in a similar field or jobs with a particular focus (such as health, commerce or education). Examples include wanting to work in forestry or search and rescue and becoming a tourist guide, hoping to be an electrician and becoming a coil winder and a clerk who had hoped to be a secretary. Table 6-10 below shows the participants included in and excluded from this comparative analysis and the numbers in each of the four groups described below.

⁶⁷ Ten of these had no adult occupations so nothing to compare their aspirations to. Two others had incomprehensible aspirations (possibly specific workplaces) and another two wanted an 'enjoyable job' so were not able to be compared to their adult occupations.

Table 6.10: *Similarity of Pathways teen aspirations compared to Dunedin Study adult occupations*

	Same teen aspiration and adult job	Teen aspiration and adult job at same NZSCO level	Similar teen aspiration and adult job	Teen aspiration and adult job nothing alike	No adult job or not codable aspiration	Total
Females	60	48	22	190	11	331
Males	47	49	30	196	3	325
Total	107	97	52	386	14	656

Even including second choices of aspirations, the numbers of participants whose adult careers were exactly the same as their desired teen occupation was relatively small. Sixteen percent (n=107) of those with aspirations worked in their desired occupation. Because a quarter of the *Pathways* participants had no recorded specific aspiration, the proportion of the entire *Pathways* cohort meeting their aspirations was only 12%.

The adult career of over half of the participants in no way reflected their teen aspiration (n=386). In order to see whether this larger group differed from those who had *any* similarities between their teen aspirations and adult occupations, the three groups where aspirations and outcomes were the same, similar or at the same NZSCO level were grouped together. This meant that 256 people were categorised as having the same or similar occupations. When compared with the 386 people who had adult jobs that were totally different from their teen aspirations, there were few differences. Both groups contained equal numbers of males and females and average IQ and SES were very similar. There did appear to be an association between having managerial/professional teen aspirations and working in an occupation similar or the same as aspired to, which was nearly significant $\chi^2(1, N=642), = 3.39, p=0.07$. This is perhaps not surprising when the largest proportion of *Pathways* participants aspired to professional occupations and it was also the largest group of *Dunedin Study* member's jobs.

The *Pathways* participants' belief in their likelihood of obtaining an occupation⁶⁸ did not predict whether or not their adult work reflected their teen aspirations. For this analysis the four groups (same, similar, at same NZSCO level and totally different aspiration and occupation) were compared by the teenage participants' belief in their likelihood of obtaining that occupation. Chi square tests for independence showed that there was no association between teenage belief in likelihood of obtaining a career and actually working in it as an adult, χ^2 (9, N=622) = 3.39, p=0.14. The tests were repeated for the group with managerial/professional aspirations and those without. Belief in ability to obtain a job was not significantly associated with working in that occupation as an adult for either group: professional/managerial aspirations, χ^2 (9, N=378) = 11.21, p=0.26; other aspirations, χ^2 (9, N=244) = 12.08, p=0.21.

In terms of gender differences, 36% of girls and 40% of boys believed that they had a good chance of getting their desired occupation. These girls and boys were not significantly more likely to end up in an occupation that was in any way similar to their aspiration than teenagers who did not think that they had a good chance of obtaining their desired occupation: girls, χ^2 (1, N=313) = 0.21, p=0.65; boys, χ^2 (1, N=309) = 0.34, p=0.56 . Individual perceptions of the chance of obtaining desired occupations were unrelated to actual outcomes.

These results suggest that while aspirations may be important for obtaining a higher level occupation, most teenagers do not end up working in the job they aspired to. Teen belief in ability to obtain a desired occupation was not correlated with working in one's aspired job as an adult. And, there appears to be little difference in terms of gender, IQ or SES between those who meet their occupational aspirations and those who did not.

The Role of Gender in Adult Occupational Attainment

Earlier in this chapter it was noted that the *Dunedin Study* men and women generally did different types of work from each other as well as from their teenage aspirations. In this section I present the gendered differences of the adult cohort's work compared to their teenage aspirations. As with the *Pathways* participants' choices, the adult occupations of the *Dunedin Study* members' were coded for gendered dominance. Occupations were

⁶⁸ The *Pathways* participants were asked what chance they thought they had of obtaining their desired occupations. Options were good, fair, poor or do not know.

coded as male if they were on Pringle's (2010) list of traditionally male occupations or if 80% of the people employed in that occupation in 1986 were male. Female dominant occupations were those on Pringle's (2010) traditionally female occupations or if 70% of the people employed in that occupation were female. Occupations that did not meet either criteria were considered gender neutral.⁶⁹

There were 258 different occupations that the 862 working *Dunedin Study* members were employed to do as adults. Of these, 149 were male dominant, 60 were female dominant and 49 were neither. Forty-eight percent ($n= 202$) of the adult women worked in occupations that were not female dominant, while only 28% ($n=123$) of the men were working in occupations that were not male dominant. Below, Figures 6.3 and 6.4 show the comparison of the proportions of *Pathways* participants aspiring to differently gendered occupations and the proportions of *Dunedin Study* members working in gendered adult occupations. These comparisons are between the *Pathways* participants with aspirations ($n=622$) and all the *Dunedin Study* members who had adult work ($n=862$).

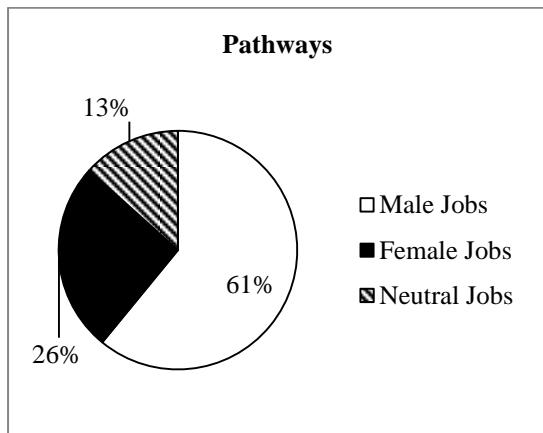


Figure 6.3. *Pathways* gendered aspirations.

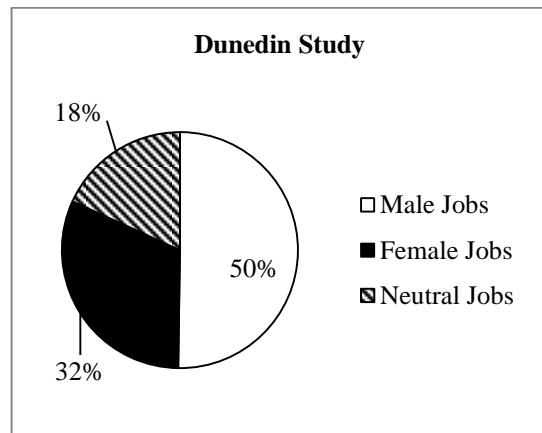


Figure 6.4. *Dunedin Study* gendered occupations.

The difference in the gendered nature of adult work compared to teenage aspirations was largely determined by more men working in neutral and female-dominant occupations than the *Pathways* boys had intended. In the last chapter we saw that 89% ($^{273}/_{309}$) of boys hoped to work in occupations that were male-dominant. In comparison 72% ($^{318}/_{441}$)

⁶⁹ See Chapter 4: Methods and Appendix 9 for more details of the gendered categorisation of *Dunedin Study* members' occupations.

of the *Dunedin Study* men worked in male-dominant careers, 12% (n= 53) in female-dominant and 16% (n=70) gender-neutral occupations. The proportions of gendered aspirations of *Pathways* girls and *Dunedin Study* women's occupations stayed around the same, although there was a small decrease in the proportion of those who had hoped to work in male dominant occupations compared to those who were working in such careers. Thirty four percent ($^{106}/_{313}$) of *Pathways* girls aspired to male dominant occupations and 27% ($^{115}/_{421}$) *Dunedin Study* women worked in male dominant occupations. There was a corresponding minor increase in the percentages of women who worked in female-dominant and gender neutral careers. Males were more likely to aspire to and be employed in male dominant occupations while there was more variation for females.

To further investigate the association of gendered aspirations and adult occupations, the following analysis is of only those who had both teenage occupational aspirations and adult occupations (n=613). This smaller adult cohort was similar to the entire adult workforce in gendered occupations with just under half working in male dominant occupations, a third in female-dominant and 19% in gender neutral occupations.

Sixty-one percent ($^{94}/_{155}$) of those who aspired to female-dominant occupations were working in female jobs as adults and 61% ($^{233}/_{379}$) of those who aspired to male-dominant occupations worked in adult male jobs. However, only 38% ($^{30}/_{79}$) of those who aspired to gender neutral occupations worked in gender neutral occupations. Forty-two percent ($^{33}/_{79}$) of the neutral-aspiring teens worked in female dominant occupations as adults and the remainder worked in male-dominant jobs. This is possibly because two-thirds (n=52) of those who aspired to gender neutral occupations were females and, as seen later, women were more likely to work in female dominant occupations as adults.

It was difficult to compare the gendered teen aspirations and adult occupations of the male participants because of the small numbers of boys aspiring to occupations which were not male dominant. However, it appears that having aspirations which were not male dominant did not make it any more likely that boys would work in occupations that were not male dominant. Two-thirds of the 36 boys who aspired to non-female occupations worked in male-dominant occupations, ten in gender neutral occupations and only two in female-dominant occupations. Interestingly, 12% ($^{33}/_{273}$) of boys who aspired to male occupations worked in female occupations as adults and overall 28% ($^{87}/_{309}$) of

men worked in non-male dominant occupations. While it is true that the proportion of men working in non-male occupations was greater than the proportion of boys who had aspirations for non-male dominant work (28% compared to 11%) both aspirations and occupations were more strongly traditionally gendered for men. It is also true that the increase in men's work in non-male occupations was that a substantial proportion worked in non-gendered work rather than female-dominant occupations. It seems that the message 'girls can do anything' did not transfer across to males. However, as already noted 89% ($^{273}/_{309}$) boys aspired to male occupations meaning that the small numbers aspiring to other gendered occupations made it impossible to statistically compare the gendered aspirations of boys with their adult occupations. For this reason I focus on comparing the *Pathways* girls' gendered aspirations and adult occupations in the following section.

The analysis of the gendered nature of the *Pathways* teenage girls' aspirations revealed some interesting trends. Firstly, women who had *any* teenage occupational aspirations (regardless of the gendered nature of their aspirations) were significantly more likely to have adult work in female-dominant occupations than women who had no teenage aspirations. Fifty-five percent of girls with aspirations ended up working in female dominated occupations and 44% of the girls with no specific occupational aspirations had adult work in 'female' occupations as adults, χ^2 (1, N=421) = 3.72, p=0.05.

For those *Pathways* girls with aspirations, gendered aspirations were predictive of their gendered adult occupations, particularly for girls who aspired to 'female' jobs. Sixty-four percent ($^{93}/_{146}$) of girls who hoped to work in female dominant occupations did so and 47% ($^{74}/_{158}$) of girls who aspired to non-female occupations ended up working in female-dominant jobs. A chi square test for independence was conducted with the females who had both a teenage aspiration and an adult occupation. This showed strong evidence that the girls aspiring to 'female' occupations were more likely to work in adult 'female' jobs than girls who did not aspire to female dominant jobs, χ^2 (1, N=304) = 8.72, p<0.01. While only 33% ($^{35}/_{106}$) of the girls who aspired to male occupations worked in male occupations as adults, girls who aspired to male occupations were significantly more likely to work in male occupations than those who had other types of aspirations, χ^2 (1, N=304) = 6.10, p=0.01. And, 53% ($^{84}/_{158}$) of girls who aspired to non-female occupations (either male or non-gendered) worked in non-female occupations as adults. It seems that

girls who aspired to female occupations were more likely to work in traditionally female occupations as adults and having non-traditionally gendered aspirations made it more likely that girls might work in non-female dominant occupations.

Thirty-four percent ($^{50}/_{146}$) of girls aspiring to female occupations obtained an adult occupation that was the same or similar to their aspiration while only 18% ($^{28}/_{158}$) of girls who aspired to non-female dominant occupations ended up working in an occupation similar or the same as they had hoped. Girls who aspired to female occupations were significantly more likely have an adult occupation that was the same or similar to their aspiration than the girls who aspired to male or non-gendered jobs, $X^2 (1, N=304) = 10.86$, $p<0.01$. It seems that it was more difficult for girls with non-traditionally gendered aspirations to meet their aspirations than it was for those girls with traditionally gendered aspirations.

Figure 6.5 below shows that more women worked in female occupations than aspired to them (146 aspired to female jobs, 167 worked in them), fewer women worked in male occupations than aspired to them (106 girls aspiring to and 72 women working in male-dominant occupations) and the number working in ‘neutral’ jobs increased from 52 to 62.



Figure 6.5. Comparing females' gendered Pathways teen aspirations and Dunedin Study adult occupations.

Girls' belief in their ability to get a particularly gendered occupation was not predictive of working in a female or male dominant occupation as an adult. Girls aspiring to male dominant occupations who thought that they had a good chance of getting their desired occupation were not significantly more likely to work in a male dominant occupation than

those who thought that their chance was fair, poor or did not know, χ^2 (1, N=106) = 2.52, p=0.11. This was also the case for the girls aspiring to ‘female’ occupations: those who believed that they had a good chance of getting their occupation were not significantly more likely to work in a female occupation than those who had less belief in their ability to get their job, χ^2 (1, N=146) <0.01, p=0.99.

T tests showed that the groups of women who worked in female and non-female occupations as adults were significantly different in both SES and IQ. The women working in male-dominant occupations had significantly higher IQs than those working in female occupations, t (292) = 4.0, p < 0.01 (mean= 110 and 105 respectively). They also came from families with significantly higher SES, t (301) = 2.1, p = 0.03 (mean= 3.3 and 3.1 respectively). It must be noted that 62% of the non-female occupations were professional or managerial while only 24% of the female occupations were classed as professional or managerial. So, it may be that the nature of non-female work attracts women from higher status families with higher IQs. However, it does suggest that women with social and cognitive advantage are more likely to work in non-female dominant occupations, perhaps because it requires more resources to pursue work in non-stereotypical areas.

These results show that most males in both the studies aspired to and worked in traditionally male occupations while the girls were more likely to consider a wider range of gendered occupations. They were more likely to work in ‘male’ or non-gender dominant occupations compared to the *Dunedin Study* men’s likelihood of working in ‘female’ or non-gendered occupations. However, the majority of both genders aspired to and worked in traditionally gendered occupations. The *Dunedin Study* adults who aspired to work in traditionally gendered occupations were more likely to get the type of gendered work that they aspired to.⁷⁰

⁷⁰ Allocating occupations to gender-dominant categories by percentages of gendered workers in each category is not a ‘self-fulfilling’ prophecy because the allocations were from the gendered workforce in 1986. This enables comparison between the gendered aspirations of the *Pathways* and *Dunedin Study* participants and avoids the adult cohort merely reflecting the contemporary workforce.

Discussion

Teen aspirations for an adult career appear to be important for adult occupational outcomes. *Pathways* participants with occupational aspirations were more likely to have managerial and professional occupations as adults. The majority of *Pathways* participants who had particular occupational aspirations hoped to work in professional level occupations. It seems reasonable to suggest that it is not the specific aspirations per se that influence adult outcomes but the desire to work in a professional occupation. Having professional aspirations would dictate subject choices at high school, leading to tertiary education for many and eventually occupations at managerial and professional levels. This was particularly true for males, for whom higher IQ was more predictive of adult managerial and professional occupations than it was for girls. In order to progress to ‘higher’ level occupations, more boys required higher level motivation (in terms of professional aspirations) as well as cognitive ability. This suggests that teenage boys may be particularly vulnerable to motivational factors influencing their pathway through the educational system. It appeared that familial SES maybe slightly more important in predicting the level of their adult occupation for girls than it is for boys. There was a significant difference in the childhood SES of women who ended up working in managerial and professional occupations and other women. This implies a dichotomy in the career paths of young women, with those from middle class families aspiring to and working in managerial and professional occupations. Meanwhile, girls from the working classes may struggle through compulsory education with fewer resources and work in less secure and well-paid adult occupations.

While specific aspirations in the teen years seem to lead to higher level occupations the nature of the participants’ desired and actual work was very different. Only about one in eight participants worked in the exact occupation they aspired to. It is not obvious what makes it more likely that teenagers will fulfil their vocational dreams. The group of participants who met their vocational aspirations as adults did not vary from the rest of the cohort by gender, SES or IQ. Teen belief in ability to get an adult occupation was not predictive of working in that job. The only significant difference between those adults working in their desired occupation and everyone else was that the women who worked in their aspired occupation were more likely to aspire to a ‘female’ occupation as teens. This suggests that it may be easier to follow one’s vocational dreams if those dreams are

traditionally gendered. It is important not to over emphasise this interpretation, however, because the same comparison of traditional and non-traditionally gendered aspirations cannot be made for the males, due to virtually all of them aspiring to male occupations.

Part of the reason that *Pathways* teen aspirations did not predict their adult occupations lies in the nature of the aspirations held by the teenagers. The majority hoped to work in professional careers. This means that the comparison of people who aspired to and obtained the same occupation largely became limited to those working in professional occupations as adults. Anyone without a professional occupation was unlikely to fulfil their teen occupational aspiration. However, there are other potential reasons that most adult occupations did not reflect earlier teen aspirations. These are discussed below.

Firstly, the nature of the workforce changed considerably between the 1980s and 2004. Radical economic and political transformations also occurred in New Zealand in the 1980s and 1990s (Nairn, Higgins, & Sligo, 2012; Roper, 2005) and globally (Andres, 2010). The employment market *Pathways* participants anticipated at age 14 and 15 was not a reality by the early twenty-first century. Those with a specific occupational aspiration as teenagers imagined themselves in a total of 107 different jobs whereas, as adults, the *Dunedin Study* members were employed in any one of 258 different occupations. Some of the occupations the *Dunedin Study* members were employed to do as adults did not exist or were in their infancy when they described their vocational ambitions in 1986. The information technology industry and service industries, in which a substantial number of people made their adult careers, grew phenomenally in that period of time. Changes in technology have been rapid and there has had an associated increase in information technology careers.

The changing economic climate also meant that fewer people were employed in manufacturing and primary production and comparatively more were employed in sales, services and management, often on short term and casual contracts. As teens, very few people aspired to become managers, and those who did, imagined themselves managing shops. As adults, 107 *Dunedin Study* members worked in 23 different managerial

positions.⁷¹ Few *Pathways* participants aspired to occupations in the manufacturing industries either; perhaps already aware of the decline in this area which was underway by the time they were interviewed in 1986. As production declined and globalisation took hold, particularly in New Zealand, where importation laws were the most liberal in the world, the retail industry became a major employer. This is evident in the occupational make-up of the *Dunedin Study* cohort. Being a sales assistant was the most common adult occupation (only two people hoped to become shop assistants whereas 39 worked as sales assistants as adults) and many others were employed in other aspects of the retail industry, such as marketing managers, sales representatives, credit, account and dispatch clerks.

The decrease in manufacturing brought an increase in unemployment and attention was turned to developing an educated workforce to create a ‘knowledge economy’ in the late twentieth century (Higgins, 2002; Organisation for Economic Co-operation and Development, 1996). The high percentage of adults working as managers, professionals and technicians suggests that the *Dunedin Study* members responded to the challenges of increasing de-industrialisation and globalisation and accompanying high levels of unemployment by completing tertiary qualifications. Girls were particularly well represented in these categories and many of the managerial and professional occupations formerly dominated by men, were being performed by increasing numbers of women.⁷² The rise of the knowledge economy was reflected in the *Dunedin Study* adult workforce: no-one aspired to work as a tertiary teacher and yet this was the ninth most common adult occupation.⁷³

Another feature of the economic reforms of New Zealand in the 1980s was the downsizing and outsourcing of much of the existing infrastructure. The armed forces were indicative of this change in publicly funded organisations and agencies. Being in the armed forces was the fifth most popular aspiration of the teenage cohort but between 1986 and 2004, the military downsized significantly, providing many fewer employment

⁷¹ These included marketing, engineering, information technology, financial, administration, construction, research and development, supply and property managers, along with more traditional general, retail, hotel and factory managers.

⁷² For example, in 1986 16% of lawyers were women and in 2001 36% of lawyers were women.

⁷³ Thirteen people worked in occupations coded as university lecturers, which includes all tertiary ‘teachers’ such as teaching fellows and tutors along with lecturers in any tertiary setting (university, polytechnic, post-school training providers).

opportunities. In 2004 only three *Dunedin Study* members worked in what remained of New Zealand's armed forces. By contrast, 26 teens had hoped to enter the armed forces.

Part of the mismatch between adult occupation and teenage aspiration can be explained by the higher proportion of adult workers who were employed in elementary occupations such as plant operators, labourers, cleaners, drivers, factory hands and freezing workers. While only 2% of the *Pathways* participants aspired to occupations coded as plant operators (primarily they wanted to be drivers) and none wanted to do elementary work, 13% of *Dunedin Study* members were employed in occupations at these NZSCO levels. It seems likely one of the reasons that teens did not aspire to occupations at these levels is because these jobs do not have high status or wages and often have precarious work hours, contracts and conditions. It is also possible that some *Pathways* teens *did* want to work in occupations at these levels but the NZSCO coding system did not incorporate their answers. Answers like 'just any job', 'a well-paid job' and naming particular workplaces (examples are cheese factory, tannery, bakery) were not able to be coded via the NZSCO categories but suggest that these young people hoped to work in occupations requiring less training. There were also 220 *Pathways* participants who described no specific aspiration at age 14 or 15. These young people, too, may well have been unclear about wanting a *specific* occupation but hoped to get *any* paid work in the 1980s, an era of high unemployment.

Another possible reason for the higher number of participants working in these 'lower' level occupations than aspired to them is that some people worked in areas outside of the area in which they trained. Over a third of the people who worked in occupations at elementary and plant operator NZSCO level had trained to do other types of work. Presumably some of these people were unable to get jobs in the area that they trained in and some chose to work in other types of occupations for other reasons. Many of the *Dunedin Study* members were beginning their families in their early 30s so may have chosen to work in occupations that were more conducive to family functioning (such as occupations with fewer hours or less travel) than the occupations they trained for.

One aspect of *Pathways* teen aspirations did remain constant in the *Dunedin Study* members' adult work: boys' vocational aspirations were traditionally gendered and the majority of men's work was also in 'male' dominated occupations. Very few (53 of the

441 men) in the cohort had adult jobs in female dominant occupations. They worked as sales assistants (which was female dominant in the 1980s but was not by 2001)⁷⁴ or teachers, while a small number worked in other ‘female’ occupations like hairdresser and nurse. Men who worked in areas that were not traditionally ‘male’, were more likely to work in gender neutral occupations rather than female-dominant occupations. Gender neutral occupations included factory workers and service and sales positions like sales representatives, real estate agents and recreation guides. Women had a broader distribution across the gendered work spectrum. Just over half of them worked in female dominant occupations and 48% worked in either male-dominant or occupations that were not dominated by either gender. Women who worked in occupations that were not female-dominant were more likely to be from families with higher SES and have higher IQs than those who worked in female-dominant occupations. The majority of the women who went into ‘male’ occupations worked in managerial/professional occupations. They worked as accountants, managers and tertiary teachers. It is not true, however, that girls aspired to or ended up working in ‘male’ work at other occupational levels. Only six women worked in trades occupations and 11 in agriculture and fisheries occupations.

A further explanation for female dispersion into traditionally male occupations lies in the sheer number of male occupations compared to female. Despite criteria for inclusion in the category of male dominant occupation being more stringent (80% of workers are male) compared to female (70% of workers are female), there were more than two times as many ‘male’ occupations than ‘female’ amongst the *Dunedin Study* members’ adult jobs. As girls investigated their career options, there were many more options in traditionally male work, some of which was appealing due to higher status and salaries. For boys, the traditionally female dominant occupations provided few advantages, being generally poorer paid and with lower status.

When reflecting on the changes in the nature of women’s work in the last three decades, it is also important to remember that over half of the *Dunedin Study* women did work in female dominant occupations (such as teaching, nursing and clerical work) most of which are associated with the stereotypical caring and support characteristics associated with

⁷⁴ The New Zealand census from 2001 shows that only 62% of 85,530 sales assistants were female.

women. And while 27% of women worked in male dominant occupations, a slightly larger proportion (34%) aspired to ‘male’ occupations when they were teenagers.

Conclusion

It is increasingly hard to project into the future. Political and economic decisions and rapid technological advances mean that we cannot know what the future employment market and workforce will look like. This comparison between teenage aspirations in 1986 and adult paid work in the early 21st century makes this abundantly clear. However, those who have a particular ambition appeared to fare better than those with no occupational aspirations to guide them.

It is also clear from this data that most teenage aspirations did not predict adult occupations. Even allowing for two teenage choices, only 16% of *Dunedin Study* members worked in the occupation they had aspired to. Having made some suggestions here about why it might be that most vocational aspirations are not met, in Chapters Eight and Nine, I turn to a different type of data to examine some of these reasons in greater depth. Before that, I explain the methods used to capture and analyse the *Transitions Project* data.

Chapter 7

Methods II: Analysing a qualitative data set

The previous chapter showed that it was unusual for *Dunedin Study* members to be employed in the occupation that they had aspired to when they were teenagers participating in the *Pathways Project*. What occurs between the early teens and adulthood to explain why young people's career aspirations are usually not met? In the next two chapters, a further dataset is analysed to explore this question. Prior to describing the results from this analysis, there is a brief description of the *Transitions Project* cohort, followed by an explanation for using this dataset to elucidate the gap between *Pathways* participants' aspirations and their adult occupations. An outline of the theoretical approaches which guide the analyses concludes this chapter before the findings are presented in the following two chapters.

The Transitions Project

The *Transitions Project* was conducted from 2003 until 2006 with 93 young people completing compulsory education and moving into further education and/or the workforce. Like the *Dunedin Study*, the *Transitions Project* was a multidisciplinary project but from a different research tradition. The intention of the *Transitions Project* was to provide a rich analysis of qualitative data drawn from in-depth interviews with a diverse group of young New Zealanders. The sample was not intended to be representative of New Zealand youth. The focus was on the identity work of these young people and how they crafted their identities within a neoliberal context (see Nairn, et al., 2012 for a full description of the project's overall goals). The research was intended to identify the challenges, dilemmas and accomplishments young people faced at the end of compulsory education. Insight into their decision-making processes was obtained by conducting semi-structured interviews with open-ended questions. A key feature of the *Transitions* participants' identity construction revolved around career aspirations and decision-making. This aspect of the interviews provided the data for the current thesis.

The methods of data collection were multiple and guided by a participatory ethos where young people were included in the research process. This approach was influenced by the United Nations Convention on the Rights of the Child, Article 12, which establishes the rights of children and young people to participate in decisions, research and other

activities affecting them. All participants were offered three different ways of participating in the project. Participants decided on which and how many of these they would participate in. They could choose to be interviewed by an adult researcher working in one of three sites: a small rural South Island town in the Southland province and two major metropolitan areas (Christchurch in the South Island and Auckland in the North). There were six interviewers (of whom I was one) across the three sites. Five interviewers were Pakeha New Zealanders, one was Māori and all were university educated women.

The second method of participation for participants was to train to become a ‘peer interviewer’ and interview two peers. Thirteen young people (four each in the rural site and Auckland and five in Christchurch) took up this opportunity and were also research participants themselves, being interviewed by an adult researcher. The peer researchers were trained in interviewing, administered interviews, wrote fieldnotes and participated in post-interview activities, such as transcribing (if they expressed an interest in doing so) and exit interviews. They were paid for their work.

The third way that young people could participate in the *Transitions Project* was by constructing an ‘anti-CV’ or identity portfolio where they were invited to construct a portfolio to express their identity in ways not possible in a standard curriculum vitae. This included using music, photography, video, writing and artwork. The 17 participants who chose to do this were then interviewed about their portfolios. The data used in this project comes from all of these different types of interview: adult in-depth interview, peer interview and identity portfolio interview.

The interviews were about participants’ experiences of schooling and future plans along with a myriad of other topics related to their identity.⁷⁵ The interviews were semi-structured covering a range of topics and took between half an hour and several hours to complete. The questions for the first open-ended interviews were developed in conjunction with a group of young people from the first research site. These questions were largely replicated in the other two sites. Questions were a guide to enable participants to talk about the things that were important to them. The participants talked about school, family, extra-curricular activities, paid and unpaid work, relationships,

⁷⁵ The interview schedules are detailed in Appendix 4 but these were guidelines and interviews varied due to their semi-structured nature, which were conversational in style.

spirituality, their hopes and dreams for the future, and the current reality of their lives. Subsequent interviews were personalised where questions were developed from the data obtained in earlier interviews. The identity portfolio interviews were based on the participants' interpretations of their portfolio. Interviews were transcribed by professional transcribers and checked by members of the research team for accuracy.

Transitions Participants

The interviews began in 2003 with 38 young people in the rural town. In 2004 the Southland participants were re-interviewed and the first interviews were conducted in Christchurch. In 2005 the second Christchurch and first Auckland interviews took place and the last Auckland interviews were completed in 2006. There were 27 participants in Christchurch and 28 in Auckland. In all centres, the researchers went into schools and other educational settings to invite young people to participate. Recruiting in the rural area proved to be easier than in the urban centre, which explains the higher number of rural participants. In the urban centres, along with visits to schools, the researchers made use of informal networks and 'snowballing' to recruit participants. The majority of participants were in their last year at high school when they had their first interview. There was also some purposeful sampling to include young people who were early school leavers and in alternative education settings. These were six young mothers, four young men who had been excluded from mainstream education and attended an alternative education facility, and two other young men who had left school early. Two young women and a young man were in their first year at university when they were first interviewed.

This was a diverse group in terms of social class, ethnicity and school-leaving status. Seventy participants were young women, twenty three were young men. At the time of the first interview they were aged from 14 to 22 years with the majority aged 17 or 18. Fifty-three were Pakeha, twenty were Māori, fifteen were Pasifika (most of whom were born in New Zealand) and five were from new migrant families from elsewhere than the Pacific Islands. Sixty-six (19 male and 47 female) of the original 91 *Transitions* participants (73%) participated in a follow up interview and a small number also had a third interview. The success of follow-up interviews was not consistent across sites. Twelve of the 28 Auckland participants (43%), 20 of the 27 Christchurch participants (74%) and 34 of the 38 Southlanders (89%) participated in a second interview. Eight

people (all from Southland) had a third interview in the final year of the data collection. This included two intending to return to school,⁷⁶ three who had intended to leave school after their first interview but returned to school and three further participants were asked for a third interview⁷⁷. There are 74 second and third interview transcripts, of which 42 come from Southland participants. The length of time between first and second interviews varied because a small number of participants were not initially able to be traced or were unavailable for interview until later in the year after leaving school. This meant that at the time of follow-up interviews, some participants were just beginning their post school journey while others were a year or more out of school at the time of second interview.

The *Transitions project* provided very different data to that from the *Pathways* and *Dunedin Study* described in the previous three chapters. As a result, the *Transitions* data required different methods of analysis, which are detailed later in this chapter. Next, however, I provide a justification for using the *Transitions* data to explain the difference between the *Pathways* participants' aspirations and their *Dunedin Study* adult occupations.

Using the Transitions data to explain Pathways/Dunedin Study results

It might seem incongruous to use a qualitative dataset of teenagers' views collected in the early 2000s to explain the vocational aspirations and behaviour from an earlier cohort, where the data was gathered and analysed with quantitative methods. However, a constructivist epistemology promotes multiple ways of knowing which are able to inform and query each other (Crotty, 1998). The justification for using the *Transitions Project* is in the value of the in-depth nature of the data which can explore some of the potential reasons for the difference between teenage aspirations and adult occupations identified by the comparison of *Pathways* and *Dunedin Study* data. As already noted, the primary value of mixed methods research is to provide a dialogue between research questions, methods and practices. As I will demonstrate, using a range of methods applied ethically and respectfully to different datasets, it is possible to provide greater clarification and

⁷⁶ These two were included because they both applied to be peer researchers. One of them went on to become a peer researcher. The research staff decided to include them both in the cohort because of their interest in the project.

⁷⁷ Three interviewers (including the author) conducted all the Southland interviews and while data collection continued in the other sites, the decision was made for each of the interviewers from the Southland to interview one key participant for a third time.

insight into research questions. Revisiting at different datasets in different ways to reflect on particular questions may address inconsistent results, provide convergence (Hesse-Biber, 2010) or different ways of understanding with a goal of advocating for social reform.

It is important to ensure research incorporates historical and current knowledge so that it is relevant to current and future generations. The *Pathways* participants were teenagers in the 1980s and the *Transitions* participants had their teen years in the 1990s and early twenty-first century. Below I argue that, despite the historical difference, these cohorts share two important similarities which make it appropriate to use the *Transitions Project* data to explain the difference between the *Pathways* participants' aspirations and the *Dunedin Study* members' occupations.

The two cohorts share an age and stage of life. 'Youth' is a phase in the life course explained as a stage between dependent childhood and independent adulthood (Henderson, Holland, McGrellis, Sharpe, & Thomson, 2007). The *Transitions* teens were interviewed at ages that fall between the ages of the participants in the *Pathways Project* and the *Dunedin Study*. The *Pathways* participants were aged 14 or 15 when they identified their career aspirations and this was compared to their adult occupations as *Dunedin Study* members. The *Transitions* participants were aged between 14 and 22 years at time of first interview and I use their data to show some of the processes and structures that occur and are encountered between the imagined career of early teens and the reality of adult occupations.

The participants in the *Pathways/Dunedin Study* and the *Transitions Project* were born in the 1970s and 1980s respectively. Both groups experienced a time of neoliberal change in their post school lives. New Zealand's neoliberal reforms began in the 1980s becoming increasingly entrenched through the next two decades (Nairn, et al., 2012). As two 'generations' these cohorts shared these macro level political, social and economic conditions. It is important to consider the specific historic context when considering teen transition from compulsory education. Interpretative research acknowledges that research data is context dependent, and reveals much of the idiosyncrasy of a time, place and/or specific group. Thus, it is important to acknowledge and compare the experiences and resources shared by a 'generation' of young people. When working with the concept of

‘a generation’, it is important to remain mindful that gender, class, culture and location differ for each individual (Andres, 2010). However, individuals from a generation *do* share the macro level social, economic and political relations. This makes it possible to see how different individuals have access to different resources within this broader context.

As two ‘generations’ and as two groups of ‘youth’, these cohorts share similarities. This is exemplified in the similarity of the percentage of each cohort who actually *did* fulfil their teenage aspirations. Fewer than 20% of the participants from both sets of studies followed their occupational plan from high school.⁷⁸ In their open-ended and individualised interviews across time, the *Transitions* participants gave full explanations of the various factors contributing to the ideas, plans, dilemmas and quandaries influencing their career intentions. This information provided explanations for understanding why the teen aspirations of the majority of *Pathways* participants were not realised in their adult occupations.

Methods of Analysis

The analytical approach to the *Transitions* dataset was influenced by the work of Andres and Wyn (2010) who warn of oversimplifying analysis by imposing a theoretical schema upon it. They advocate using conceptual frameworks that highlight structural processes and allow analysis of change and continuity to make sense of attitudes and beliefs. Similarly, Jackson and Mazzei (2013) advocate moving beyond categorisation of qualitative data so that the focus is on producing a different type of knowledge by incorporating theory and data equally into the analytical process rather than finding generalities, themes and patterns (Jackson & Mazzei, 2012, 2013). Conceptualising the data in this way allows for insights about difference, transformations and social structures which might be missed or ignored if the focus remains on generalities and patterns.

The *Transitions Project* data took a different form from that of the *Pathways* and *Dunedin Study* data. The survey data of the *Pathways Project* and the structured interview data

⁷⁸ 107 of the 656 (16%) *Pathways* participants had adult work in the job that they had aspired to as a teen. At the time of their second interview, 12 of the 66 (18%) *Transitions* participants with second interviews were doing exactly what they had hoped to do in the previous year. It would be unwise to place too much importance on this comparison due to the different nature of the cohorts and methodologies but it is an indicator of how many people do vary from their vocational aspirations.

from the *Dunedin Study* provided specific answers, which could be coded. The *Transitions Project* data took a range of forms. There were many, many pages of transcribed conversational interviews of which audiotaped copies were available for analysis, along with interviewer notes and reflections and a range of multi-media data from the ‘anti-CVs’. This is one of the advantages of qualitative research: it provides a wealth of detailed data. This detail is often not captured or can be lost in the generalisation and types of analysis required in the processing of quantitative data. However, an abundance of detailed data requires analytical systems of understanding to make sense of the breadth of the data without losing the detail and idiosyncrasies. Like the quantitative data, this data also required respectful and reflexive methods of analysis suited to the nature of the data.

Two different theoretical frameworks were used to analyse the *Transitions* data. As noted in Chapter 4, I am guided by a constructivist epistemology, which allows for different ways of knowing. Critical theory has historically used a variety of theories and disciplines for investigating empirically how social and economic structures were produced and reproduced (Rasmussen, 2013). Thus, I found that by using different theoretical frameworks and multiple methods of data analysis I was able to provide insight and identify themes, individual differences and discontinuities. It is also important to acknowledge that all theoretical perspectives and methods of analysis have shortcomings and strengths. Using two theoretical approaches enabled me to address different aspects of the data, making use of the strengths of each approach. Analysis occurred ‘across’ the *Transitions* participants, noting the consistencies and contradictions between individuals using the Chaos Theory of Careers and ‘within’ the life stories of the participants using a narrative approach. Each of these approaches to the data was guided by different conceptual approaches and I detail these below, also briefly describing the advantages and disadvantages of each method of analysis and how they compensate for each other’s limitations. The results from the analyses are presented in Chapters Eight and Nine.

Chaos Theory of Careers

Chaos Theory of Careers (CTC) is a theoretical approach, which is modelled on the scientific theory of complexity. It is the study of behaviour of complex dynamical systems, and applied to career development (Pryor & Bright, 2011). It is in contrast to

traditional career development theories that focus on a small range of variables, which are thought to be relevant to vocational behaviour and view vocational decision making as a rational and controlled process (Pryor & Bright, 2003). Career research has traditionally focused on linking individual skills and characteristics with occupational requirements with the assumption that career decisions are made with full information by rational individuals in a predictable setting (Bloch, 2005; Pryor & Bright, 2004). The traditional trait-factor approach fails to capture the complexities and uncertainties facing current and future workers within rapidly changing occupational structures (Amundson, et al., 2014; Bland & Roberts-Pittman, 2013; Peake & McDowall, 2012; Savickas, 2011). Rather than a reductionist approach, CTC has an ‘emergent’ approach, going beyond the narrow and precise to different levels to look for patterns of behaviour that emerge from complexity (Bright & Pryor, 2005). Such an approach is able to incorporate paradoxes that may account for the greater complexity and dynamism in careers (Amundson, et al., 2014).

Complexity theory is a systems theory (Peake & McDowall, 2012; Pryor & Bright, 2003) with the foundational premise that the world is made up of complex systems which are continually changing, interconnected, responding and adapting to each other (M. Mason, 2009; Plsek & Greenhalgh, 2001; Sanders, Munford, & Liebenberg, 2012). Complex behaviour evolves or emerges from relatively simple interactions between system components. Systems are sensitively dependent on initial conditions (Pryor & Bright, 2014) meaning that there is a non-proportional relationship between cause and effect. Systems are pattern seekers, changing from experience, responding to their ever changing complex environments. As a result, systems are ordered but not predictable.

Principles of complexity theory have been used across different disciplines (Bright & Pryor, 2005; Manson, 2001) and while they may be operationalised differently, they share the objective of understanding complex adaptive systems, explaining how they remain static or evolve (Alvaro et al., 2011; Manson, 2001). Through the work of Pryor and Bright (2003, 2007, 2011, 2014) complexity theory has been applied to vocational behaviour research in the form of the Chaos Theory of Careers. CTC provides a relatively new framework for conceptualising career choice and development.⁷⁹ Chaos theory has

⁷⁹ Pryor and Bright first published the theory in 2003 but it has continued to develop as a theoretical, explanatory and pragmatic approach to understand career development, culminating in a recent special edition of the Australian Journal of Career Development (2014) commemorating a decade of CTC work.

the ability to bring together disparate phenomena through general principles accounting for the impact of social, economic, structural, cultural and individual factors on career development.

Pryor & Bright (2011) identify humans as ‘systems’ which are interacting with other ‘dynamical systems’ such as other people, employers, labour markets and the economy. However, I have chosen to identify people as ‘individuals’ within the CTC theoretical framework. This is for clarity purposes but also to acknowledge the primary role of the individual in their vocational interactions as well as the influence of the range and hierarchy of ‘systems’ (individual, family, community, structural, economic, policy).

The key concepts from the Chaos Theory of Careers used to understand the *Transitions* data are: chance or unexpected events, the interaction of individuals and systems, and attractors. These are briefly described below.

Chance

The impact of chance events in occupational behaviour has been given limited theoretical attention historically but an emerging theoretical perspective acknowledges unplanned occurrences (Bloch, 2005; Bright, Pryor, Chan, & Rijanto, 2009; C. P. Chen, 2005; Sanders, et al., 2012). The term ‘chance’ is used in this literature to describe a myriad of different occurrences, activities and influences which encompass the unplanned, unexpected, unforeseen, unintended and sometimes, serendipitous. Empirical research confirms that many people report the impact of chance events on their career decision-making (Hirschi, 2010). These include such things as personal circumstances and relationships, unintended exposure to work environments and/or colleagues, and unexpected incentives or barriers to vocational possibilities (Borg, Bright, & Pryor, 2014; Bright, et al., 2009; Bright, Pryor, & Harpham, 2005; S. McDonald, 2010; Peake & McDowall, 2012). Other research shows that encountering and taking advantage of serendipitous events was advantageous for specific professional and creative careers (Bornat, Henry, & Raghuram, 2011; Diaz de Chumaceiro, 2004). Chance events have potential for unforeseen consequences, possibly halting, initiating or changing vocational plans and behaviour.

The results presented in the following chapter contribute to a greater understanding of the effect of chance events on vocational behaviour because the analytical approach to the *Transitions* data differs from previous empirical investigations into the role of chance events. Existing research required participants to retrospectively interpret life events as ‘chance’, usually guided by examples (Bright, et al., 2009; Bright, Pryor, & Harpham, 2005; S. McDonald, 2010). This approach has potential for problems of recall, where research participants may forget unplanned events or perceive them as planned in hindsight.⁸⁰ Research participants may also fall victim to the power of suggestion by reinterpreting an event as ‘chance’ because of awareness of the research purpose. The *Transitions* participants were not subject to problems of recall. They were not able to reinterpret events as ‘chance’ in hindsight because their interviews were virtually concurrent with the events. Nor were they asked to identify particular events as ‘chance’ but merely described their vocational plans and journeys, which ensures that participants were not guided by leading questioning. Instead I was able to identify the impact of unplanned and chance events from their interviews. Chance events proved to be an important factor in the *Transitions* participants’ interviews even when the impact of chance was not the initial focus of the research.

The Interaction of Individuals and Systems

The Chaos Theory of Careers suggests that each individual operates in a specific context, interacting with systems which are always changing. Systems reach a critical point where they are at edge of chaos where order co-exists with disorder (Alvaro, et al., 2011). It is at this point that change occurs. As a result, context is characterised by unpredictability. Disproportionate effects of change can be difficult to foresee or predict. From a CTC perspective, interactions between individuals and systems produce unique arrangements that dynamically change each other and the environment over time. Vocational choices and behaviours are influenced by contextual factors occurring at different structural levels and may include such things as interpersonal relationships, educational opportunities, the labour market, economic constraints and social mores.

⁸⁰ As this project neared completion Borg, Bright and Pryor (2014) published the results from a study where 55 high school graduates were asked about change in the year since they left school. The participants in this study were not subject to problems of recall and had a large amount (71%) of unexpected change. This is discussed in Chapter 8 in relation to the *Transitions* participants’ level of change.

Attractors

Chaos theory uses the concept of ‘attraction’ to describe how individuals attempt to impose order on their environment, adapting to maintain or recreate order when they encounter change. The ‘attractor’ is the way in which individuals typically respond to their changing environment via their habits, predispositions, values and abilities.

Attractors guide individuals’ vocational behaviour in providing parameters and guidelines which are developed via experiences and interactions with other systems. This is a complex process of gradual change guided by previous experiences and individual limits of acceptability. Over time individuals develop different styles of attraction and a lifetime career can be viewed as a ‘fractal’ where the same features are seen at different levels of examination. Fractals are patterns that are similar across scale, allowing for both the regularity and randomness that occur in vocational behaviour (Amundson, et al., 2014). Understanding how a system works on one scale indicates how it works on others (Manson, 2001). Each encounter with a system is part of the larger whole and an individual career path can be seen as a part of the entire work and economic system (Bloch, 2005). The process of attraction explains individual responses to chance events and contextual factors encountered and helps us understand how young people make decisions in the face of potentially competing advice, relationships and developments.

The Chaos Theory of Careers provides a conceptual framework to identify some of the reasons that young people’s career aspirations are often not met. The theory identifies events and contextual factors, which young people respond to in several different ways depending on their circumstances and past experiences (attractors) resulting in different outcomes for their career trajectories. This theory is applied to the *Transitions* data in the next chapter. The strengths of this theoretical approach are in its dynamic and non-reductionist features (Bloch, 2005). It can identify the contextuality, complexity and contingency, exposing fragmentation, discontinuity and unpredictability (Manson, 2001). It provides new thinking about accepted phenomena and is able to show how systems are sensitive to small changes. CTC is also able to capture the dynamic nature of the interactions of structural and individual factors (Bright, Pryor, Wilkenfeld, & Earl, 2005; Lent et al., 2002). CTC has been developed conceptually over some time and used practically for counselling (Hooley, 2013; Pryor & Bright, 2014). However, it can be difficult to define the boundaries of chaos theory systems and to link chaos theory to

reality (Manson, 2001). The greatest shortcoming of CTC is its inability to incorporate differential power relationships (Alvaro, et al., 2011): The explanatory power of CTC does not extend to explaining individuals' differential access to resources but focuses on responses to changes in systems. For this reason I have also analysed the stories of five *Transitions* participants using critical theories. These are a postfeminist lens and Bourdieu's theory of practice. These are described after outlining the advantages of using individual stories or narratives. This approach guides the analysis of Chapter Nine and is detailed below.

Narrative

Narrative reports allow for contradiction and individual difference and can explore the non-typical as well as the typical. "Story is essential to learn what is unique to some and universal to others and how both are parts of a dynamic interacting whole" (Bujold, 2004, p. 477, citing Atkinson, 1998). Some critical theorists suggest that, since there is no neutral or objective view of the world, the most appropriate stance is to view the world through the eyes of the agent (Celikates, 2006). Life stories can be analysed by placing them into social, historical and cultural context, focusing on central moments or critical incidents of indecision and contradiction to give a more complex view of reality (Rich, 2005). These critical incidents are key features of people's stories (Henderson, Holland, McGrellis, Sharpe, & Thomson, 2007). Individual lives (and stories) are made up of periods of routine interspersed with turning points (Hodkinson & Sparkes, 1997).

Narrative accounts are simultaneously process (making sense of one's experiences) and product (the story). The *Transitions* interviews were conducted over two or three years, which allowed the participants some time for reflection on their past as well as projecting into their imagined futures. The imagined future was an important part of these stories showing how the past, present and future can come together (Pisarik, Rowell, & Currie, 2013).

Story-based research is able to investigate the relationship between individual agency and social and cultural contexts where power relationships can be elucidated (Bosley, Arnold, & Cohen, 2009). Narrative provides insight into the complex and multi-layered world of vocational decision-making via individual stories of sense-making. Cohen et al (2004) state the concern of constructivist research is with interpretation and meaning making and

narrative approaches allow participants to attend to socially enabling and constraining factors.

Analysing narratives requires moving beyond merely vocational factors to investigating the impact of *all* aspects of participants' lives. The data from this project enabled this holistic approach because the overall focus of the *Transitions Project* was on identity. Features of the various facets of participants' lives provided an opportunity to explore the connection between identity and vocational work. Identity is understood as complex and dynamic, always in process and crafted in the context of relationships (Nairn, et al., 2012). A narrative approach indicated the ambiguities, changes and consistencies within interviews.

I used two critical theories to understand the narratives of the *Transitions* participants. Critical theory requires an analysis of competing power interests between groups and individuals, exposing the forces preventing people shaping decisions that affect their lives, especially the economic decisions (Kincheloe & McLaren, 2011). The division and appropriation of power is a key concept for critical theories and is a relative concept, where people can be oppressed in one context and empowered in another. Power is defined as "the capacity and opportunity to fulfil or obstruct personal, relational or collective needs" (Davidson, et al., 2006, p. 38). Critical theories have four basic dimensions: they identify the problem or situation, define the social situation which agents operate within, showing their actions and relations, expose and explain the underlying structures and mechanisms of the situation, and disclose practical "realisable normative possibilities" (Delanty, 2011, p. 88). This last step is the crucial transformative concern of critical theory (Rexhepi & Torres, 2011). Davidson (2006) states that transformation involves individuals or groups overcoming sources of oppression to pursue wellness. The critical theories used in the narrative analysis are Bourdieu's theory of practice and a postfeminist sensibility. These theories identified the structural and personal factors that support or impede the fulfilment of vocational aspirations, which were identified in the detail of individual stories.

I have used a postfeminist lens to complement Bourdieu's theory of practice. Bourdieu's theory of practice emphasises the role of class and consumption in domination. However, Bourdieu was not blind to other sources of inequality: he acknowledged the role of other

“life conditions”, such as ethnicity and gender as determinants of individuals’ social space (Weininger, 2005). Bourdieu ascribed gender as particularly important because it is a binary (male and female) and because gender differentiation has been legitimated on the grounds that it is a ‘natural’ division. Bourdieu acknowledged the work of contemporary feminists in exposing gender asymmetry and the mechanisms underlying it (Weininger, 2005). This project, with its reflection on the gendered nature of aspirations and occupations, required a method of analysis which brought gender to the fore. These two critical theoretical lenses are used to identify different power structures with a goal of exposing the sources of inequality for young people making vocational decisions. Below I outline the key concepts in each theory.

Bourdieu’s Theory of Practice

Bourdieu’s theory of practice⁸¹ has been identified as an effective research tool within the field of career research for describing and explaining inequality and happenings in a social order (Chudzikowski & Mayrhofer, 2011; Fitzsimmons, Callan, & Paulsen, 2013; Henderson, et al., 2007; Hodkinson & Sparkes, 1997). There are three key concepts from Bourdieu’s theory, which are used in the narrative analysis.

1. Fields

‘Fields’ of social space exist within the macro-context of society. Fields can be understood as a series of institutions, rules, conventions, and practices, which require competent action to conform to the specific rules and roles in that field. Fields can be represented by the analogy of a game: the rules of the game, although not explicit, are determined by power struggles, alliances and negotiations. In this project, the ‘field’ is post-school education and work, where different individuals may have different goals. Young people are one group within the field, which also may include employers, training providers, parents, institutions and schools. Interactions between the ‘players’ define the structure of the field (Hodkinson & Sparkes, 1997). Conflict occurs as individuals attempt to acquire a more advantageous position within a field.

⁸¹ Bourdieu’s theory of practice is outlined with references to secondary commentators because of the requirement of the theory to be overarching and complementary to the other methods of analysis. Bourdieu’s opposition to the separation of theory and research meant that most of his conceptual innovations were developed in the context of concrete empirical analyses. This means that Bourdieu’s original works are very explicit and time-specific.

2. Habitus

‘Habitus’ is a socially constituted system of dispositions (Weininger, 2005): an ensemble of perception, thinking, feeling, acting, beliefs and preferences which are influenced by social networks and cultural traditions in which people live. Habitus is acquired through a complex interplay between past and present: individual and family histories contribute to habitus but it is also permeable and responsive to the current environment (Reay, et al., 2009). Habitus allows for individual agency but provides a generative formula by which to act. There is class ('people like us') and individual habitus. Although habitus is a product of early childhood experience, it is continually re-structured by individuals' encounters with the outside world (Reay, 2004b). “When habitus encounters a field with which it is not familiar, the resulting disjunctions can generate not only change and transformation, but also disquiet, ambivalence, insecurity and uncertainty” (Reay, et al., 2009, p. 1105).

3. Capital

The third key concept in Bourdieu’s theory is ‘capital’, which refers to the resources available to use in a field. Bourdieu differentiates between three basic types of capital: economic capital (money able to be transferred from one generation to the next), social capital (resources based on social connections) and cultural capital. Cultural capital is information or knowledge about specific cultural beliefs, traditions and standards of behaviour that promote success and accomplishment (Schaefer-McDaniel, 2004). Cultural capital is socially determined (Lareau & Weininger, 2003) and is a culturally specific ‘competence’ that is efficacious in a particular social setting. In highly differentiated societies, the family and the school are primarily responsible for inculcating cultural capital (Weininger, 2005). Others have applied the notion of ‘capital’ to other types of resources, such as gender capital (Fitzsimmons, et al., 2013; Huppertz & Goodwin, 2013) and emotional capital (Reay, 2004a) and gone beyond European cultures to describe cultural capital for different cultural groups (Mila-Schaaf & Robinson, 2010; Yosso, 2005). All forms of capital are unevenly distributed across a field and some forms of capital have more dominance and importance than others in any given field.

Bourdieu’s empirical tools of ‘field’, ‘habitus’ and ‘capital’ can be used to make sense of the social world because they reveal how individuals engage with the world where structures are predefined by broader racial, gender and class relations. The relationship

between the capital valued by a field and the habitus of the individuals generating the capital in that field regulates the individual's success in the field (Fitzsimmons, et al., 2013).

Postfeminist Sensibility

A postfeminist sensibility (Gill, 2007) is used to interpret the gendered nature of the narratives in Chapter Nine. Gender has been identified as one of the sources of inequality that shapes how individuals and groups make the decisions that affect their lives (Kincheloe & McLaren, 2011; C. L. Williams, 2013). Gill (2007) advocates a postfeminist 'sensibility' as an approach for analysing media portrayals of gender which is equally relevant for interpreting young people's gendered talk. While 'postfeminist' is still a contested term (Hall & Rodriguez, 2003 Ringrose, 2007 #742), a postfeminist sensibility requires an acknowledgement of the contradictory nature of postfeminism, simultaneously incorporating and denying feminist ideas (Gill, 2007). Ringrose (2007) states that some associate the term 'postfeminism' with postmodernist moves to deconstruct gender and others with an anti-feminist backlash. Ringrose's position is that 'postfeminism' is a useful conceptual tool for tracing the complex effects and implications of various forms of feminism.

A postfeminist sensibility reflects on how young women believe themselves to be set free from tradition and restraint while structural inequality continues (Baker, 2008). Features of postfeminism include its connection with other axes of inequality (class, culture, age), the invisibility of feminism and reluctance of young women to name themselves as feminist (Pomerantz, et al., 2013). Postfeminism assumes that the relative gender equity of education and qualifications are reflected in the home and workplace (Ringrose, 2007) yet maintains many of the traditional assumptions about women and men (Baker, 2010). Postfeminism focuses on individualism, choice and empowerment.

Postfeminism constructs an articulation or suture between feminist and anti-feminist ideas, and this is effected entirely through a grammar of individualism that fits perfectly with neoliberalism (Gill, 2007, p. 162).

A postfeminist sensibility requires an inquiring critical approach to the data, acknowledging the contradictory nature of postfeminist discourses and the entanglement of both feminist and anti-feminist themes within them.

Chapter Nine focuses on the stories of five *Transitions* participants, analysing the detail of their interviews with these two theoretical perspectives. This will provide complementary ways of understanding the forces that support and undermine the fulfilment of aspirations. Before then, however, the next chapter provides an analysis *across* the dataset using the theoretical lens of the Chaos Theory of Careers.

Chapter 8

Chaos Theory of Careers: A way of understanding why teen aspirations are not predictive of adult occupations

In this chapter, the Chaos Theory of Careers is used as an analytical device to explain the processes of the *Transitions* participants in their journey after compulsory education. At the time of their first interview, the majority of the *Transitions* participants were in the process of making decisions about their intentions for the following year. They did not make decisions in isolated, clinical ways but encountered a range of different factors, within and outside of themselves that they responded to and incorporated into their vocational behaviour. The Chaos Theory of Careers (CTC) is used to explain how these young people came to the vocational places that they found themselves in a year later. CTC suggests that individuals respond to their environment and unexpected situations in different ways and the outcomes of this process can be surprisingly non-proportional.

Like the *Dunedin Study* members, most of whom did not meet their teenage aspirations, the majority of the *Transitions* participants did not do what they had intended to do at the time of their first interview. At the time of their second interview only twelve of the 66 people who consented to a second interview had carried out their specific plans as described in their first interview. For many it was difficult to assess whether they had met their aspirations because their first interview plans were vague, non-existent, partially formed or they were choosing between several options. This is portrayed in Figure 8.1 below, which shows that the majority of participants' plans were relatively vague. Even those with definite long term plans were often not specific, describing such things as an ambition to become a manager or some type of teacher. This made it difficult to precisely compare their aspirations with their educational or employment outcomes at the time of their second interview.

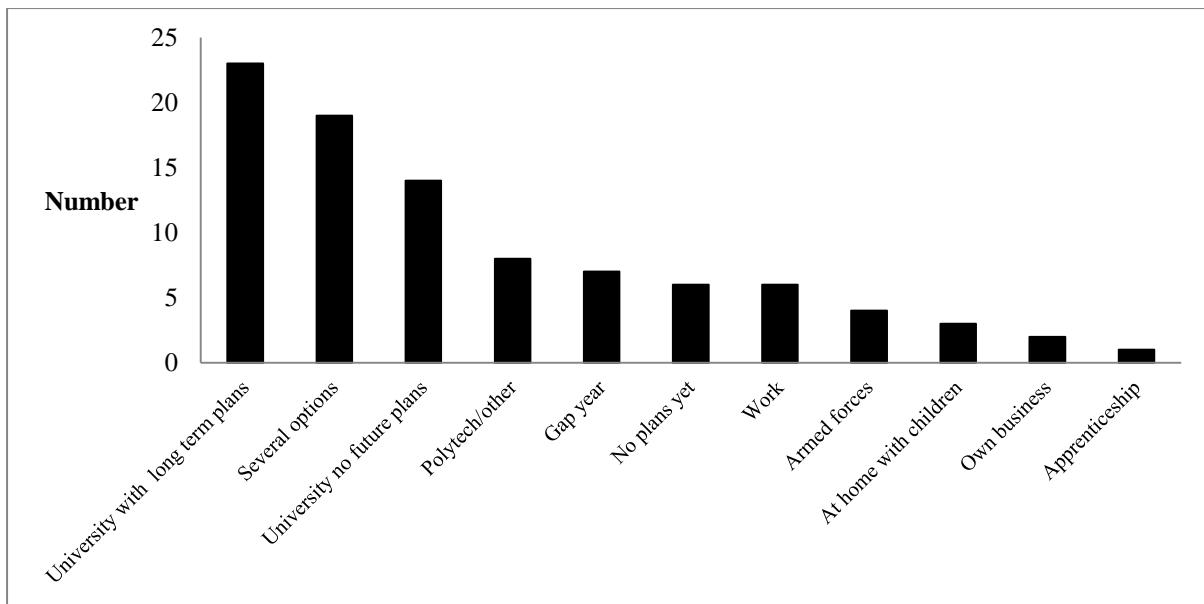


Figure 8.1. Transitions participants' plans at time of first interview.

Twenty-six people did something that bore no resemblance to their previous year's intentions while the remainder did something similar or followed one of their potential plans. Change occurred for many after they had made an initial 'decision': fifteen of the 66 participants with second interviews dropped out, or changed course or job in their first year out of school. CTC provides a way of understanding the causes and impacts of this varied vocational behaviour. Below I outline some of the chance and contextual events that the *Transitions* participants encountered and describe their impact before detailing the different styles of response or 'attraction' that were developing in these young people's interactions with other 'systems'.

Chance Events

Research has found that around two-thirds of people attribute changes in their education or work to chance effects (Hirschi, 2010). The incidence of chance events was lower for the *Transitions* Study with nearly half (32 of 66) describing an unexpected situation or event that impacted on their choices or behaviour. The lower occurrence of chance events is partially explained by their interviews being virtually concurrent with the events and the relatively short timeframe between interviews. This means that participants had less hindsight with which to identify and reflect on the impact of such events. However, Borg, Bright and Pryor (2014) recently published the results of their study of 55 high school graduates who, like the *Transitions* participants, were interviewed a year out of

school to assess the change between their plans and what they were currently doing. Seventy-one percent of the respondents in this study reported a level of unexpected change, a much larger proportion than that of the *Transitions Project*. It must be noted that Borg et al (2014) include change in any aspect of the participants' lives (such as with family, friends, accommodation as well as vocational change), and the subject of the questionnaire was unexpected change. This may have caused them to focus on change and perhaps be more likely to interpret it as unexpected. These features of the research may account for the particularly high proportion of respondents who had encountered unexpected change in plans on leaving school.⁸²

Unlike other studies (including that of Borg et al, 2014 mentioned above), which focused on the impact of unexpected events, the *Transitions* participants were not asked to identify these events per se. Chance events were identified by the researcher as unexpected or unplanned events or situations if they had an *obvious* impact on participants' vocational trajectory between their two interviews. This approach shows that chance events *do* occur for many people in their vocational journey and may have unforeseen and potentially life-changing consequences. Below I identify some of the chance events encountered by *Transitions* participants and describe the initial impact of these.⁸³

The *Transitions* participants encountered a range of health events, which meant some were unable to continue work or study and others changed courses and jobs. Two people broke bones and two others got glandular fever. These people were forced to take time out from their work in freezing works, shearing sheds, ski instructing and retail jobs. One had not found work several months after his leg had healed. Two people, who intended to go into the armed forces, were unable to do so because of health issues.⁸⁴ Another participant got a viral infection and withdrew from her university course. Two people suffered from mental health problems in their first year out of school. Neither could continue to study full time. Others described requiring an operation, experiencing grief and allergic reactions, all of which had impact on their ability to work or study.

⁸² It is also possible that there was a higher proportion of *Transitions* participants without a follow-up interview who changed their plans from the previous year, given that 27 of them did not participate in a second interview because they could not be contacted.

⁸³ The impact described can only be short term because of the relatively short time between interviews (the maximum time between first and last interview was three years).

⁸⁴ One had asthma and the other had a back injury.

Becoming pregnant, while not a health problem per se, but with health (and many other) implications, had a major impact on the vocational plans of two participants.

Health of other people also influenced vocational decisions. Two participants had parents with serious health concerns, and as a result both changed the location of the institutions where they studied to be closer to their parental homes. Another young man was enrolled in a course away from his home town, when his mother was diagnosed with a terminal disease. After she passed away the participant withdrew from his course and shifted back to assist his father, eventually starting an apprenticeship in his home town and changing his career.

‘Chance events’ include the unplanned or unexpected: poor examination results had a long lasting impact for the vocational choices of several *Transitions* participants.

Participants’ first interviews were peppered with concern about whether school results would frustrate their post school intentions. Not passing exams, failing to meet entry criteria or failing to get accepted into courses were the most common reason for changing intended plans. Twenty of the 57 participants who sat exams prior to their second interviews failed at least some of them. Second interviews showed that plans were adapted, changed or abandoned, not only as a result of performing more poorly than expected at high school, but also in tertiary study. Thirteen of the 66 participants who had second interviews failed at least part of the course that they were studying after leaving school. For most, this meant changing or repeating courses and others dropped out completely. Doing unexpectedly well academically also meant changed plans for some. Four participants who had intended to leave school after year 12, decided to return for a further year when their exam results suggested that they would be able to cope with further academic work. Others who were unsure about tertiary study decided to go to university when their exam results were better than expected. Exam results also determined who received scholarships and enabled some to afford to go to institutions they may not have otherwise been able to attend.

Unforeseen events associated with relationships influenced the paths of several participants. One young mother’s future plans were thrown into disarray when her husband left her. Several participants described the impact of relationship break-ups on ability to study, often with dire consequences for the completion of qualifications. Future

plans were often linked with relationships and if these broke down, the impact could be pronounced as this quote from Vanessa⁸⁵ indicates:

It's [the future] all a bit up in the air because my relationship ended two weeks ago and so all of the plans that I did have and all of the goals that I was working towards have kind of fallen through in a really big way so where I stand right now is really unstable.

Forming a relationship also had potential to alter plans or change vocational behaviour. For example, one young woman changed her study plans to join her new boyfriend who was being stationed in the armed forces in a different city, a male participant changed his plans to incorporate those of his girlfriend (who had become his fiancée in the period between interviews), and another young woman described being less focused on her educational goals and more willing to pursue different options now that she had a boyfriend.

Social encounters determined information about courses or jobs for some. This was truly 'chance'. For example, Elizabeth was looking for work and ran into a friend who was about to leave a job and through his recommendation and a timely visit to his workplace, was able to obtain full-time work. Andy was indifferent to his course of study at university and his parents had a chance meeting with some friends who owned a business in Andy's home town. They mentioned that they had a vacancy in the business and this information was passed on to Andy who expressed an interest in the position and was about to go for a job interview at the time of his second interview. If it was successful, he would leave university and start a career in the business.

Some participants described how encountering information in the media or their local environment inspired them to follow a particular course or occupation. Louise planned to become an actor but her 'plan B' was formulated when she read a newspaper advertisement for entertainers on cruise ships. Amy described her interest in fashion design being sparked by a television advertisement and seeing a poster on the wall at school and Pania heard a radio advertisement that inspired her to enrol in a bar manager course. Kristy said that her desire to work in an office came from being taken to see a play set in an office when she was just seven years of age.

⁸⁵ All names were changed to code names in order to protect the confidentiality of the participants.

Sometimes information about courses or jobs was sought out rather than being encountered haphazardly. Several participants described searching on vocational websites in an attempt to find some vocational inspiration. This type of seeking sometimes had its random components, as this quote from Bailey suggests:

If I was bored or something I'd look up the Internet and just look for jobs on there and stuff.

Researching potential career paths requires some agency but the products of searching can be seen as somewhat ‘chance’.

Other unpredicted and chance events included encountering restrictions to an intended path, such as not being accepted into a course or not meeting the required pre-requisites. For example, Orla had decided that she would take a gap year and go overseas to work as a camp counsellor. However, when she applied to the camp placement agency, she discovered that she was not old enough to work as a counsellor. This threw Orla’s plans into disarray and, as she said:

I went through a bit of a stage thinking ‘what am I going to do now? Eventually she went back to her holiday job, met her partner and they formulated new plans for the future together.

These examples show that unplanned or chance events came in a range of forms and had unexpected consequences. Participants responded to chance events in different ways, setting in place initial plans, which begin the career of an individual. As we see later in the chapter, CTC suggests that initial responses may initiate a pattern of characteristic responses to future events.

Vocational choices and behaviour are also influenced by contextual factors. It is important to acknowledge that the demarcation between ‘chance’ and ‘contextual’ events is not always distinct. As the examples above indicate, some chance events are more likely to occur to some people than others. Previous research suggests that chance events or ‘serendipity’ and their potential effects are not evenly distributed and are structured by social or contextual factors (S. McDonald, 2010) and by individuals’ responses to them (Bright, et al., 2009; Bright, Pryor, & Harpham, 2005; Hirschi, 2010). Below, I describe the contextual factors that influenced *Transitions* participants’ vocational choices and address the differing styles of response to chance and context via the CTC concept of

‘attraction’ before identifying the different types of attractor that might develop over individuals’ vocational lifetimes.

Contextual factors

Contextual factors occurred at interpersonal, local and societal levels. For clarity, I have addressed each separately in the analysis below but these levels are not mutually exclusive and may interact with each other, sometimes creating conflicting and contradictory influences on the choices and behaviour of the young people.

Interpersonal Factors

Relationships with a range of people played a substantial role in the vocational behaviours of the *Transitions* participants. Bosley et al (2009) distinguish different roles of other people in vocational behaviour and call them ‘career shapers’ who can provide or deny suggestions, knowledge, feedback, opportunities or exert influence.

The opinions of participants’ families and friends were important factors in decision making. As Wyn, Lantz and Harris (2012, p. 15) concluded about the participants in their study, the *Transitions* participants and their parents “derive a range of emotional, physical, spiritual and other types of human experience from each other.” At the time of their first interviews, nearly all the *Transitions* participants were living with at least one of their parents and those who not living with their parents had significant contact with them.⁸⁶ When asked who they talked to about their future decisions, most *Transitions* participants said they talked to their parents and many also mentioned friends. Peers were primarily used as a sounding board but for one group of six high school friends, their plans for the following year were motivated by their desire to keep their friendship group together. Same-sex friendship has been shown to influence post-secondary educational choice (Sinclair, et al., 2014). Relationships with a ‘significant other’ were also important influences on some participants’ vocational behaviour and are discussed in greater detail in the next chapter.

⁸⁶ At the time of the first interview 73 *Transitions* participants lived with at least one parent. Five young mothers lived with partners or alone with children, six participants were at boarding school (some went home for weekends), two lived with grandparents, two were flatting, one lived with her brother, one lived in the family home but her parents had shifted away and one was an international student whose parents were still in his home country.

Sometimes, other people's guidance was interpreted as pressure. At their first interview 78 participants were asked if they had experienced any pressure to head in a particular direction. Just under half (35 participants) said they experienced pressure. Only one person talked about being 'forced' to take a particular course but thirty-four other participants described direct pressure from other people (usually family members, such as parents) to take a particular course or attend a specific institution. Another twelve described an underlying expectation or assumption that they would get a qualification consistent with their ability, or what others in their family have done. Participants also described an expectation from others that they should resolve their vocational indecision. Faced with this usually covert pressure, participants were required to balance what was hoped for them with a range of other potentially competing factors, such as the cost of courses, whether they wanted to live away from family and friends, their past experiences of education and paid work and their ideas about what would be interesting and stimulating as a future career.

Transitions participants talked to others who had done similar courses or who were thought to have particular knowledge about a potential plan. They described adult friends, work colleagues and bosses as having been consulted and sometimes influential. Several talked to teachers, careers advisors or guidance counsellors at their school who had been helpful or inspirational. For example, Bao-Zhi had an accounting teacher who helped him develop his confidence in the subject inspiring him to study accounting at university. Others had direct guidance from teachers or employers. Aleia wanted to study Japanese and her Japanese teacher told her which university would be the best to apply to. Regan was encouraged to apply for Teachers' College by the principal of the school where he worked as a teachers' aide. Advice did not always transfer into action especially when faced with competing suggestions or potential scenarios. So, while some, such as Aleia, pursued the suggested path, others did not. At the same time as he was contemplating applying to Teachers' College, Regan's aunt offered him a trip to Australia to "start a new life", which he decided to accept. Others started to follow a suggested path and deviated from it: when Bailey was undecided about her post-school path, her mother convinced her to study commerce at university. Although she valued her mother's opinion and followed her advice, commerce did not fit with Bailey's interests and she could not maintain the course of study:

Stuff like accounting and management was sort of boring to me and I didn't really enjoy it and so I changed papers this semester and now I'm doing psychology and education and I'm finding that way more interesting and I think I'm changing my whole degree to a Bachelor of Education and a major in psychology.

Her desire to study a topic that was interesting overrode her initial decision to follow her mother's advice to get a business qualification. However, she did remain at university which prevented falling out with her family, which was also important to her.

Interactions with different people and systems were often conflicting. The significance of competing priorities on vocational trajectories is demonstrated by the young parents in the cohort. For example, Grace described what happened when she tried to further her education:

I have enrolled in Uni and I've been to a couple of lectures but I didn't enrol the kids in crèche so they're on the waiting list. [I'm] probably going to end up dropping out 'cause I have nowhere for them to go. Because, in the end, it's probably too much time and I should really wait until I'm more prepared I think. A focus on the future to improve the outlook for herself and her children was undermined by the priority of her current responsibilities. Grace's dilemma shows how interactions with other people and systems can be contradictory and paradoxical. Individuals respond differently to encounters and challenges depending on the values, abilities and dispositions they possess. It is also important to remember that this was not a one-way interaction: the other people that the *Transitions* participants interacted with provided different types of advice, guidance, barriers, support or access in the process of vocational decision making.

CTC reminds us that all systems are complex and interconnected. The relationships described in this section took place in different contexts, which also influenced the nature and impact that the relationships had on young people's vocational behaviours.

Interactions occur within the two contextual factors (local and societal) described below.

Local factors

Individuals exist and interact with others and systems within a local context. *Transitions* participants' ability to follow their vocational dreams was influenced by the local context that they found themselves in. They had different experiences of school and study environments, geographic location and voluntary and paid work.

By the time of their second interviews, many participants had moved away from their familial homes and their commitment to or ability to follow through with their vocational plans was sometimes compromised by their immediate location. Participants described various living situations: in halls of residence, flats and boarding, the impact of which varied. For example, Antoinette failed some of her university courses as a result of the "dramas" in her flat, which meant that she left university and went into paid work for a year, while she rethought her long term plans. Others found it motivating to be with a group of like-minded people and were able to work or study harder.

Participants attended a range of different types of educational institutions with varying amounts of resources.⁸⁷ Schools were not always able to offer particular subjects that were required for some courses or considered helpful for preparing young people for life after school. Nearly a third of the *Transitions* participants who were asked if their school experience had prepared them for life after school said that had not.⁸⁸

The amount of careers information and support provided at schools also varied. Careers information and advice can be crucial for school leavers to learn about career and study options and what is required by training providers. Some found it very helpful: Aniwa described the information available at her school:

We had career planning and it was helpful, like we had talks from all the universities and they told us about what courses they had and how much it would

⁸⁷ 81 participants attended a total of 20 different high schools and colleges in their last year at school which ranged in decile rating (a measure of school population SES ranging from a low of 1 to a high of 10) from 2 to 10. These included co-educational and single-sex, day and boarding schools, rural and urban, state and integrated, non-denominational and religious schools. Ten participants were enrolled in alternative educational settings at the time of their first interview.

⁸⁸ Thirty five people were asked if school prepared them for life after school. Eleven people said that it had not (two said not really), seven said that it had, nine said that school had 'sort of', partially or slightly prepared them. Two participants said that school provided advice and support that could be helpful if students took advantage of it.

cost and all that kind of stuff and what the student life is like there. And it was just like, wow, that information, like if I hadn't got it, I don't know what I'd do. The quantity and quality of information available to the *Transitions* participants was not consistent across the cohort, perhaps reflecting the state of vocational education across the secondary sector in New Zealand. In 2006 the Education Review Office found careers education to be of good quality in only 12% of New Zealand Schools (Furbish & Reid, 2013).

Young people also need to be able to make use of the information that is available to them and several participants described finding careers information overwhelming or irrelevant because they did not have any career goals as yet. At one school, an experienced careers advisor had gone on leave and the students described their frustration at not having access to her guidance and knowledge. Several people described lack of information about pre-requisite school subjects inhibiting their choices for post-school courses. Moana summarised this:

I think it's important to know what you're doing early in college so you can take subjects that lead up to that because I knew what I wanted to do when I first started school but I couldn't really do it and so I sort of had to explore different things and, yeah, in case, just experience different areas as well. That's probably why I don't really know what I'm doing now because what I really want to do, I can't do.

Moana's indecision was partially influenced by what was available to her at school but what is not clear from this quote is the reason that she was unable to proceed with her original plan: Moana's mother refused to support her desire to join the navy so Moana felt obliged to disregard this plan. Relationships and contextual factors may compete and individuals are guided by what is considered most important to them, which in Moana's case, was the continued support of her mother.

Geographic location also impacted on vocational and educational choices. Studying locally was more economically viable and enabled students to live at home. This was attractive to some while for others, the desire to get away from their home town and move elsewhere outweighed the cost. For some, a course or scholarship was only available in a particular location so their options were constrained by the location. For example, Siobhan from the South Island was advised to take a design course only available in

Auckland and Hannah from rural Southland won a scholarship to Auckland Medical School. Options were weighed up and sometimes the institution or lifestyle could not be reconciled with young people's values. Several of the rural participants disregarded courses only available in major metropolitan areas. For example, farm boy Andy left home and went to a small university city close to his rural home but never felt like he belonged there and said:

Everything that I enjoy I just can't really do [in the university city] and so that's why I go home a lot and that's probably why I feel like a bit of a fish out of water.

Local communities were the site for paid and unpaid work which had potential to inspire or stifle participants' desire to pursue a particular path. Often paid work (full-time work or part time work to support study) was obtained via social groups, families and communities. Nearly 80% of the participants got their paid work via social connections.⁸⁹ Some were employed by parents in family businesses or on farms; others got work via friends or family members. Paid work became a motivation to pursue a career for some, while negative experiences of paid work motivated others to try different types of work or abandon work in favour of study. For example, Alannah had a school holiday job as a receptionist in a camping ground, which she loved, and along with her desire to travel, inspired her to study tourism. Alternatively, Bill's negative experience of a factory holiday job convinced him this type of work was not appealing and he decided to study social sciences at university.

Those who intended to study professional or university courses often differentiated between their casual, part time and holiday jobs and their ambitions or potential 'careers'. Their current work was seen as somewhat irrelevant to their vocational plans, apart from its requirement to provide an income to finance their future education or travel. In contrast, a small number of rural participants hoped to get *any* job in their local community. Their future options were limited by their relative lack of education. And, for three young men who had been excluded from mainstream school, their vocational options were further limited by behavioural and social characteristics which were well-known in the small community. Their challenges can be understood via the final and

⁸⁹ In the second interviews 38 of the 48 participants who were asked how they got their paid work said that it was via family or friends.

overriding contextual factor influencing young people's vocational behaviour: societal factors.

Societal factors

The impact of societal or structural factors is examined in more detail in the next chapter via a narrative analysis. However, it is important to acknowledge the importance of societal factors as contextual influences with potential for 'chaotic' outcomes. Structural factors also have a role in the ability of individuals to encounter, recognise and respond to chance and other factors that individuals encounter in their vocational decision-making (S. McDonald, 2010). This was evident in the data, which showed that participants with economic, social and cultural advantages had different opportunities and choices.

Cultural backgrounds influenced the options available to these young people. Cultural and familial norms meant that some participants were strongly guided by their parents' expectations or requirements, while others faced less parental input and/or pressure. Those with parents who had come to New Zealand to give their children a better future felt significant pressure to go to university.

Gender also provided some limits in the options that the participants considered. It was difficult to assess the gendered nature of the *Transitions* participants' intended careers because many of them were studying with vague long term occupational goals. However, Figure 8-2 below indicates the gendered nature of the *Transitions* participants' study and/or work at the time of their second interview.⁹⁰

⁹⁰ The intended occupation of those who were studying is coded for gender dominance. Nine participants' second year vocational destinations were not coded because they returned to school, were on benefits or were doing unpaid work as homemakers.

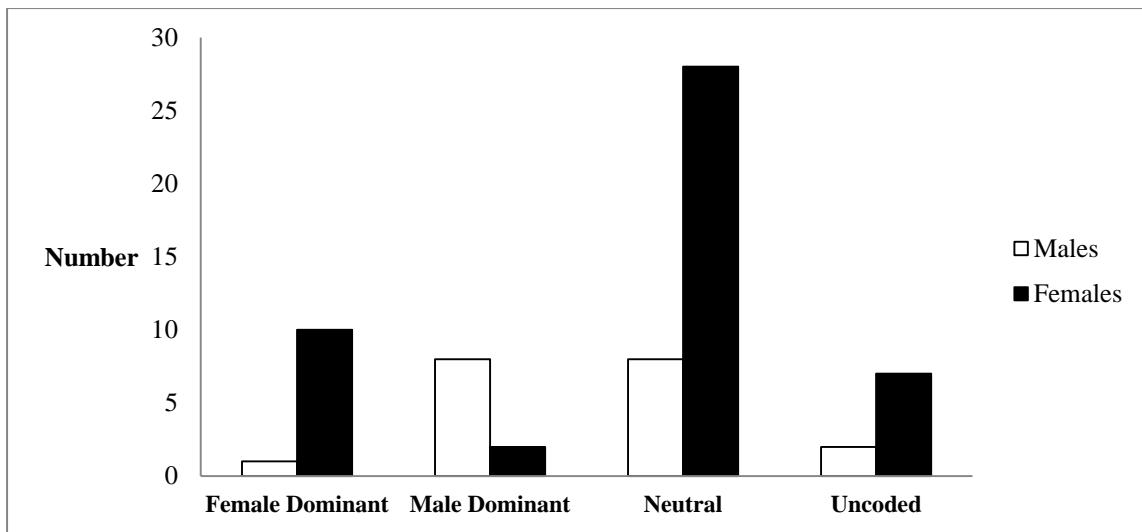


Figure 8.2. Transitions participants' gendered occupations at time of second interview.

Transitions participants' jobs and intended occupations were coded for gender dominance using 2001 New Zealand occupational numbers⁹¹ and this chart indicates some of the changes in the nature of gendered work since the 1980s, when the *Pathways* participants were asked about their intended careers. By 2001, law, management and medicine were no longer male dominant spheres. These professions account for the majority of the women's gender neutral allocation. Like the *Dunedin Study* members' adult occupations, *Transitions* women were more likely to be in female dominant or occupations not dominated by either gender while the male *Transitions* participants were more likely to be in male-dominant occupations. Only one man was employed in a female-dominant domain (he was a PA in the entertainment industry) and the two women in male dominant careers worked as a furniture removal labourer and studied to be a scientist. Interestingly, even with this relatively small sample, there was a greater range of male-dominated occupations compared to female.⁹² The *Transitions* women chose careers that they believed to be compatible with bringing up a family, such as teaching (the majority of the female-dominant category) and professions where they anticipated working part-time at stages in their career (such as medicine and law). This issue is addressed in greater detail in the next chapter.

⁹¹ Consistent with the gender analysis of the *Pathways* and *Dunedin Study* data 'female dominated' occupations have at least 70% female employees and to be considered 'male', an occupation requires at least 80% of its workers to be men (Else & Bishop, 2003).

⁹² The female dominant jobs were teachers, a nurse and secretarial positions and the male dominant occupations were signwriter, aircraft mechanic, computer technician, electrician, freezing workers, storeperson, labourer, scientist and mechanic.

The political climate also played a part in the options available to these young people. High unemployment for young workers⁹³ and a political commitment to the ‘knowledge economy’ has sent more school leavers into further education (Statistics New Zealand, 2010). Aware of the difficulty of obtaining full-time, permanent work many of the *Transitions* participants chose further study in the hope that more qualifications would lead to work.

Neoliberal policies brought with them tertiary tuition fees (introduced in 1989), and in 1992 a system of student loans and targeted student allowances (for low-income students) was established. At the time of their second interview, 27 *Transitions* participants had student loans and 15 covered the cost of their tuition with scholarships, paid work and/or support from their parents.⁹⁴ Across the cohort there was a range of economic resources largely determined by the income of the participants’ parents and their ability and willingness to assist with further training. At the time of their second interviews, 92% of the participants received some assistance from their families, often in the form of free board. One participant describes herself as lucky because, as she said:

I am an only child and my parents are kind of well off. I know that they can support me, whereas other families have like lots of kids and they have trouble with that. But my parents have a philosophy where like, there’s no reason why I should suffer through [lack of] money while I’m at uni so why should I?

This young woman was not economically constrained in her choices so she was able to make her vocational decisions guided by her passion.

In contrast to this participant’s experience, many others ruled out particular courses because they were conscious of the cost. For example, thoughts of becoming a veterinarian and a pilot were discarded by two participants because of study time and expense. Particular institutions were chosen based on cost. Several of the Pasifika participants had decided to take a Health Certificate course that had no fees for Pacific

⁹³ 25% of 15-19 year-olds and 12% of 20-24 year-olds were unemployed in 2010 (Boven, et al., 2011).

⁹⁴ Fourteen participants were also eligible for income tested student assistance from the government. Some of these people also had student loans. This scheme is controversial because eligibility criteria are based on parents’ personal income, which means that the children of business and farm owners who have assets over income are eligible for student assistance. This was a point of contention in the *Transitions* interviews, where some described annoyance with friends who had wealthy parents getting this assistance and others described being eligible for the scheme while also having full economic support from their families (such as covering the full cost of fees or accommodation).

Islanders. Other participants stated that they would decide which course and/or institution they would attend based on whether they got a scholarship. *Transitions* participants weighed up the cost, prestige and efficacy of different options in their decision making.

Factors at a societal or structural level were not under the control of the participants. Vocational behaviour is not totally determined by one's circumstances, however. Individuals are not passive participants in the events and contexts they encounter but actively respond to these 'systems'. The CTC concept of 'attraction' provides a theoretical explanation of these responses. Below I describe how *Transitions* participants' vocational behaviour was guided by 'attractors' before identifying five different styles of attraction. Finally I suggest that these styles of response in teen years may be the origin of life-long patterns of vocational behaviour.

Attractors

Transitions participants responded to the chance events and contextual factors described above in a range of ways. The CTC concept of 'attraction' is a useful way to understand how this varied for different people. Attraction is the way that individuals typically respond to their changing environment: where the parameters of acceptable actions gradually develop based on the experience gained from previous interactions.

Transitions data shows that consistency with one's skills, interests and personality as an 'attractor' was crucial to vocational paths. Participants were more likely to be drawn to courses, subjects or occupations which they were good at and were interested in. Several participants prioritised university courses or subjects based on their best subjects at school. Others contemplated pursuing a hobby or passion as a career. Examples include a participant who trained as a ski instructor, another who hoped to become a professional golfer, two who hoped to pursue acting careers and another whose lifelong fascination with aircraft led to an application to the airforce. Vocational trajectories were disregarded (or never contemplated) if they were not consistent with individual values, interests and priorities. Some found their niche in their chosen path and flourished. However, if initial paths were inconsistent with interests or personalities, participants expressed dissatisfaction, disillusionment and lack of commitment. Eleven participants changed

courses during or after the first year out of school because their course or job was not interesting or what they had expected.

Values and beliefs also provided guidelines for attractors. Spirituality provided some parameters for appropriate vocational paths for some *Transitions* participants. Forty-five per cent of the *Transitions* participants asked about the status of spirituality in their lives considered it important.⁹⁵ All were Christian and their religious commitment took a variety of forms⁹⁶ but all shared a spiritual component to their lives, which for most, provided guidance in their vocational choices. Twelve said that they hoped to include some religious (voluntary or paid) work in their futures. Five people were more than guided by their spiritual beliefs and said that God had directed their decision to pursue a particular career (as a doctor, a nurse and three teachers).

Different individuals are guided by what is important to them. Within the cohort, there were participants who required their career path to be compatible with their commitment to sports, their families, maintaining their mental or physical health and their cultural values. Among the guiding principles that influenced the interactions that participants had with other ‘systems’ were aspirations to careers that enabled participants to travel, have time to enjoy their families and friends and were enjoyable and stimulating. When asked about their long term plans and dreams, as well as their views of success⁹⁷ most hoped to marry and have families, to live comfortably and own homes. The most common definition of success was to be happy. Other goals included enjoying life, meeting one’s goals and knowing who you are. It was these life goals that provided the impetus for and margins of vocational behaviour.

Attitudes to money provided an ‘attractor’ for some participants who were strongly motivated by money. Like cohorts in other studies (Brown, 2011; P. McDonald, et al.,

⁹⁵ 37 participants stated spirituality was important in their lives, 28 said it was not, nine said ‘not really’, six said it had been or they were not sure, seven were not asked and the answers of the other four were not conclusive.

⁹⁶ Fifteen attended a rural Catholic school, eight were active participants in Pacific Island churches and eleven were members of the Church of the Latter Day Saint (three of whom had attended a Mormon boarding school). Some had been brought up as Christians and others had chosen spiritual guidance as an important part of their lives in their teen years.

⁹⁷ Most participants were asked about their long term plans, dream jobs and success (what they needed to be successful and/or what success meant to them). However, the open-ended nature of the interviews meant that not all participants were asked *all* of these questions and they were asked in a range of ways due to the time lag between data collection in different sites (interview protocols varied slightly).

2011; Tinklin, et al., 2005) most *Transitions* participants had relatively modest ambitions, hoping to have a comfortable income. A minority described the appeal of large salaries and the resulting comfortable lifestyle, which encouraged them to pursue paths they hoped would lead to ample earnings. There were also those who hoped to obtain maximum income for minimum effort, such as two young men who both hoped to retire early after setting up businesses. Yet others hoped to combine money and job satisfaction as this quote from Beatrice shows:

[I want] a really good job that offers a lot of money and that will make me want to work every single day.

A desire for a large income was not necessarily self-motivated: Some of those from immigrant families described using their income to assist their extended families and two of the Christian participants already gave part of their income to aid organisations and the church. The young mothers and others who hoped to go directly into the workforce did not talk about wanting *lots* of money, but about having *enough* money to do the things that they wanted or needed to do in the immediate future.

This range of attitudes to money as a motivator in vocational behaviour suggests the complexity of attraction. Socio-economic background, family resources, personal beliefs and values differently impacted on the importance the participants placed on money in deciding what vocational trajectory to follow. Previous work experiences may also have impacted on the importance they placed on remuneration: Seventy one participants had experienced paid work in the last year at the time of their first interviews. Nearly all had experience of the minimum wage and the types of work that provides the minimum wage, which may well have been an incentive for desiring a higher income in their future occupations.

These examples show how participants were guided by ‘attractors’ in their responses to the different systems they encountered in their vocational journey. Vocational patterns are formed across working lives through a succession of such encounters. This is a complex process of gradual change steered by each individual’s limits of what is acceptable. These limits progressively evolve with each experience and encounter, becoming a pattern of response or style of attraction. Below I describe the different styles of attractor, with examples from the *Transitions* data and suggest that particular styles of

attractor can make it more or less likely that individuals are able to fulfil their vocational aspirations.

Styles of Attractor

CTC has sought to apply the four fundamental types of attractors from the scientific theory of chaos to career development (Pryor & Bright, 2007, 2011). These are point, pendulum, torus and strange attractors. The first three of these are limiting attractors (Bloch, 2005) while strange attractors incorporate individuals' guiding principles and past interactions to create new forms.

One of the styles of attractor, the torus attractor repeats itself in a complex but predictable way manifesting in structures, routine, predictable and habitual behaviours and thinking (Pryor & Bright, 2011). Due to the length of time it takes to develop this style of attractor, it is not included in the analysis below. The *Transitions* participants were only at the start of their vocational journeys, which meant that it was sometimes difficult to identify the style of attractor that characterised their behaviour. However, there was evidence of early indicators of the other styles of attractor in the behaviour of some *Transitions* participants. I have also identified a further attractor, which I have called the 'suspended attractor', which may be limited to early career vocational behaviour. Because *Transitions* data was only collected over a maximum of three years, it is not possible to speculate on whether those operating within a 'suspended attractor' approach maintained this style of vocational behaviour. Below I describe the types of attractor and give examples of each from the data.

1. Point Attractor

The 'point attractor' is when individuals are focused towards a single point and explains the behaviour of only a minority of *Transitions* participants. Only 12 of the 91 *Transitions* participants were certain of their long term vocational goals at the first interview and followed them precisely the next year. Eight of these people were intending to go into a professional course (law, teaching, accounting or medicine), three others enrolled in specific university courses, one went into the airforce and another became a mechanic. In the short term, being very focused on a particular goal can be conducive to meeting that goal. However, it is possible that these people encountered chance events and contextual challenges that set their vocational radar in another

direction after their second interview. In the case of those entering the highly competitive professional courses, failing to meet course pre-requisites was the most likely challenge they would face. Because the *Transitions Project* only followed these people for two years, it is not possible to report whether this did occur and, if so, how these goal-orientated people operating within a ‘point attractor’ style would cope.

2. Pendulum Attractor

A ‘pendulum attractor’ vacillates between two outcomes and vocationally presents as career indecision. Sixty-eight *Transitions* participants described several potential options for the future in their first interviews. Most were weighing up a few possible options but a minority were caught vacillating between some set plans. Harrison summarises this:

I just think there are several things I want to do.... oh, I think it's pretty much just two [I am deciding between]but no I can't do either of them and don't want to do something that I wish I'd done the other thing.... Ummm... I don't know. There will just come a day where I have to decide and I might yet toss a coin.

Fifteen of the 68 undecided participants weighed up a course of study against taking a gap year. For example, Bailey’s options were described this way:

I'm thinking of going to Australia and working or else going to uni and doing first year health science, but...apparently, that's really hard and a lot of work and I just think I might need a break.

For many of these participants, their eventual choice was made by their response to an unplanned event, such as failing an exam or contextual factors, which in the case of Bailey, was her mother strongly encouraging her to enrol at university.

3. Strange Attractor

Operating with a ‘strange attractor’ allows people to make vocational decisions guided by their own values while acknowledging and responding to inevitable change from other systems. The individual is open to influence and adapts via interactions with other systems. Many of the *Transitions* participants indicated that they were open to the possibility of happenstance. At the time of their first interviews, 75% of the participants

were still weighing up their options.⁹⁸ They acknowledged the change and uncertainty that they expected to encounter across their lives and expected that they might change careers, many describing an intention to try different jobs over their vocational lifetimes.

Although the *Transitions* participants were never explicitly asked about the impact of chance events, there was evidence that some participants were aware that chance had a part to play in their futures. When asked what he would need to achieve his goals, Harrison replied, “luck” and many acknowledged that examination results, being accepted into a course or getting a particular job might decide their future vocational path. This was not mere determinism, however. Participants applied for courses or jobs guided by their interests, values, relationships and resources but many acknowledged that their ‘plan’ may not come to fruition. It was common for participants to describe a vocational plan and then add a postscript like “I’ll just see what happens” or “I’ll wait and see”.

Vanessa sums up the ‘strange attractor’:

I’m very happy just coasting along and seeing what falls in my lap, but obviously cos I’m quite scheduled and ambitious - I want to have a lot of plans set out for me.

Operating with a strange attractor allows individuals to respond to the chance events and contextual factors they encounter within the parameters of what are acceptable to them. This experience will then influence how they respond to the next challenge.

4. Suspended attractor

The actions of a small group of *Transitions* participants were not able to be explained by any of the types of attractor identified by CTC theorists. The people in this group were ‘suspended’ in indecision. When asked about their future plans, the people in this category were unanimous in their response of “I don’t know”. When questioned further, most had some areas of interest or potential ideas but they had either not investigated their options or were overwhelmed with information. For example, Edna said:

Yeah, I really don’t really know what I’m doing next year. There’s so many options and I want to make the right one, cause yeah, I want to actually think of all the alternatives that can be before I make a decision.

⁹⁸ Sixty eight participants had several vocational options or were applying for more than one course or job.

The *Transitions* participants did face an uncertain future. The potential job market available to them was small and insecure and many of them felt pressure to succeed in this highly competitive environment. For some, the response to the pressures of this situation was inaction. Overwhelmed with potential choices and often by a dwindling motivation for study, they could not decide what to do. Unlike their peers who operated with a pendulum attractor, they were not caught between two options nor focused on one goal like those who operated with a point attractor. Only seven people had absolutely no idea of their future plans so can be described as operating with a suspended attractor. Unfortunately three of these did not participate in a second interview. However, the other four had diverse trajectories: two were enrolled in professional courses, another started studying and then withdrew because of illness, and the other person returned to high school.

This implies that operating with a ‘suspended attractor’ may not negatively impact on vocational trajectories, at least in the short term. It is also possible that a suspended attractor is only a temporary phenomenon. CTC suggests that each interaction with other systems will provide individuals with experiences that will modify their behaviour for their next vocational decision. So, when these people eventually made their initial vocational decision, the outcomes of that process will continue to influence their future vocational behaviour. However, it is interesting to note that friends later reported that two of the participants without second interviews who were ‘suspended’ at first interview, were both still undecided about their futures.

Styles of attractor explain patterns of individual responses to the vocational environment and challenges. Identifying these styles of behaviour and their potential outcomes could be a valuable tool in assisting young people in their early vocational behaviour.

Acknowledging that chance and contextual factors may be out of one’s control could be liberating and reduce pressure for people at the end of secondary school. However, it is important for individuals to realise that their responses to unplanned events are under their control or they may end up with a fatalistic approach to their futures, as this quote from Caitlin indicates:

Life just ends up happening and you don't really have much control over it sometimes. Sometimes you're just sitting there going, "Why did that happen?" you know, and just like, "Yeah, oh."

Conclusion

Vocational research has historically underestimated the impact of chance and unplanned events on vocational behaviour, assuming that young people make rational decisions based on full evidence. The data from the *Transitions Project* suggests that vocational behaviour is complex and individuals encounter challenge and support from a range of contextual factors and may also face unexpected, unplanned or chance events. The unplanned events encountered by the *Transitions* participants took a range of forms and had varying amounts of impact on their futures. Awareness that unplanned or unexpected events may occur and influence potential career options can be positive. If young people are operating with a 'strange attractor' and are able to respond to unplanned events guided by their fundamental values and principles their career path can take on a new shape and emerge in a different way or "planned happenstance" (Bloch, 2005, p101). However, it is a fine balance: placing too much significance on chance may result in fatalism. There is also evidence that attributing too much importance to the role of luck in vocational pathways may reduce goal engagement (Shane & Heckhausen, 2013). This may begin with the process of operating with a 'suspended attractor' where a feeling of lack of control over potential career options manifests in inaction. If this became a pattern of behaviour, it would be characterised by the 'torus attractor', where the same behaviours and patterns of response are repeated over time, with potentially negative outcomes for career and well-being.

Applying the Chaos Theory of Careers to the *Transitions* data showed how aspirations and intentions may be realised and actioned, adapted or abandoned. These young people were at the beginning of their vocational journey and only interviewed over a period of two years so it is impossible to know whether they continued with these vocational behaviours. However, the CTC concept of a 'fractal' would suggest that investigating the detail exposes the overall pattern. Thus, it could be argued that what was happening for these *Transitions* participants at this crucial period was a magnification of the challenges, changes and choices that occur across vocational lives. In this way, the *Transitions* data can shed some light on the difference between the *Pathways* and *Dunedin Study* data.

Between the time that the *Pathways* participants declared their vocational aspirations and when the *Dunedin Study* members described their adult occupations, they would have encountered many changes, challenges and events, which they responded to in different ways. In the next chapter, analysis of five case studies deploys a narrative perspective to understand the gap between aspiration and occupation.

Chapter 9

Narrative Analysis of Qualitative Data

The previous chapter provided an explanation for the disparity between teen vocational aspirations and adult occupations via a theoretical analysis across the *Transitions Project* cohort. The cross-sample analysis suggested that teenage participants responded to unplanned events and contextual factors, which initiated patterns of vocational behaviour. While this provided some insight into how young people might react to uncertainties in their vocational journey, complexity can become rendered invisible in the categorisation and grouping required in an across-sample analysis. And, as already noted, chaos theories underestimate the concept of power differentials (Alvaro, et al., 2011). In this chapter, I focus on five case studies from the *Transitions Project* to further elucidate what happens between aspiration and occupation. My intention is to add an alternative way of understanding the conditions and influences that support or hinder the fulfilment of aspirations by analysing the narratives of the five case studies with particular reference to the place of power in maintaining existing systems.

Five participants' interviews were chosen as key narratives. These function as exemplars to show some of the most important factors affecting young people's ability to meet their vocational goals. The case studies were chosen for a range of reasons. All had at least two interviews enabling change across time to be identified. By the time of their second interviews, none were doing what they had intended when they were interviewed at high school. In this way they were similar to the majority of both *Transitions* and *Pathways/Dunedin Study* participants. They also came from a range of cultures, family compositions, and urban and rural settings. They faced a range of different challenges and had different resources meaning that their stories are able to show the impact of individual and structural factors on vocational behaviour.

Four of the five case studies are women. This reflects the gender ratio of the cohort but it was also a conscious decision to focus on women's stories to investigate the role of gender in young women's vocational behaviour. The research projects which are the focus of this thesis were conducted at a time when the roles and expectations of women were undergoing rapid change. The young women who are the focus of these narratives all had ambitions that were not traditionally female so their stories provide a way of

understanding what motivates, supports and/or undermines women's non-traditional vocational aspirations. It was also important to include a narrative analysis of a young man so that male experiences were not ignored. This also gave the opportunity to compare the journey of a male, Dylan who was not atypical of several of the *Transitions* participants in his entrepreneurial endeavours. While some male and female participants had entrepreneurial approaches to their current and future lives, it was comparatively more common for male participants (although it is important to remember that males were under-represented in this Study). The inclusion of Dylan's story also provides an opportunity for comparison between a somewhat archetypal male story and the diversity of the young women's experiences.

Later in the chapter a postfeminist sensibility is used to reflect on three of the young women's stories, showing how gender inequality continues yet is complicated when feminist ideas are simultaneously incorporated and rejected. Prior to that Bourdieu's theory of practice is used to identify inequalities of resources using the key concepts of fields, habitus and capital as described in Chapter Seven. As I will show, when habitus does not align with the capital valued in a field, it is very difficult to find success in that field. Firstly, however, I provide a brief outline of the five case study stories, paying particular attention to critical incidents before analysing the data from their interviews.

The Case Studies

Gabrielle

Gabrielle was a young woman in her last year of school at the time of her first interview. She attended a well-regarded girls' school in Auckland. She was an only child from a working class family and her parents sent her to this school, originally against her will, to provide her with what they hoped were better opportunities. By the last year of school she was achieving exceptionally well academically. Gabrielle had holiday work in a retail outlet but most of her spare time was taken up with school work and, at the time of her first interview, spending time with her boyfriend. Being Māori was particularly important to Gabrielle, although she also identified with her Pakeha family. She had strong opinions and worked her way through various debates during her interviews. Gabrielle was interested in studying business or law and applied for several courses and scholarships, most of which she was successful in. She accepted a scholarship to a local

university where she decided to study business. By the time of her second interview, at age 19, Gabrielle's focus had changed as she prepared for the birth of her daughter.

Rebecca

Rebecca lived in Christchurch. She was born in Australia, the only child of Pakeha New Zealand parents who came back to live in New Zealand when she was 14 years of age. A year later Rebecca's parents separated and her father returned to Australia where he continued to work as an engineer. Rebecca remained with her mother who was a publican. Rebecca attended a decile two⁹⁹ high school in her local area, where her academic performance was outstanding. She was particularly interested in the sciences and eventually hoped to work in a science-related career. At the time of her first interview Rebecca was deciding between officer training in the army and studying Chemical Engineering at university. Rebecca worked in the family pub and got advice and assistance from the patrons on her future options, obtaining work experience with a precision engineer through her connections at the bar. After attending an army recruitment camp, Rebecca decided against joining the army and enrolled to do engineering at the local university. She had a scholarship and got a part-time job in retail to support herself while she studied. Rebecca's school exam results were exemplary and she was placed directly into the second year of engineering. She found this very stressful and withdrew from some courses and only passed one paper. By the time of her second interview, Rebecca had changed to a science degree and hoped to major in Biochemistry with a goal of getting into pharmaceuticals.

Elizabeth

Elizabeth was interviewed three times for the *Transitions Project*. She lived in the South Island rural site. Elizabeth was an articulate interviewee with strong opinions. Elizabeth was nearing the end of five years at a local Catholic high school at first interview and working as a dairy farm assistant at the time of her second and third interviews. Elizabeth was the youngest of a large Pakeha farming family and her parents retired from the family farm when she was 16. Elizabeth played women's football at a representative level and this took up a substantial amount of her time. Elizabeth had experienced several life changing events including the death of a friend and a sibling's serious accident. Social interaction with peers provided support and doing "insane things" (sky diving, adventure activities) was the way she described being able to "clear everything away". All of her

⁹⁹ Decile ratings are a broad measure of the socio economic status of the parents or care-givers of students at the school, on a scale of 1 to 10, with decile 1 schools constituting the 10% of schools with the lowest socio-economic communities and decile 10 schools being at the other end of the scale.

older siblings had attended tertiary institutions but, on leaving school, Elizabeth made the decision that she would not go to university. Her plan was to work to earn money so that she could travel overseas, possibly joining the airforce as a photographer in the long term. At the time of her second and third interviews Elizabeth was employed as a dairy farm assistant.

Tia

Tia was a young Māori woman who was interviewed twice for the *Transitions Project*. She attended the same high profile girls' school as Gabrielle but only moved to this school to finish her last two years of schooling after being primarily educated at Kura Kaupapa Māori.¹⁰⁰ At different times over her life Tia had lived with both her parents in various locations in blended families. Tia's parents were both employed in professional occupations but she described her mother's approach to life as much more relaxed while her father and stepmother were very busy and put more pressure on Tia. Tia was very busy at school, being heavily involved in hockey and she had a role as a Māori prefect in her final year at the girls' school. Like many of the *Transitions* participants, Tia was unsure of her vocational future. At the time of her first interview she was deciding between taking a gap year and going to university. A year and a half later Tia had dropped out of university and was working in a clerical position saving to travel to Europe. She lived with her boyfriend and his family and it was via his mother, that Tia got her job. In both interviews Tia mentioned a long term interest in studying marine biology.

Dylan

Dylan was a Pakeha South Island rural participant interviewed three times. Dylan had intended to leave school at the end of year 12¹⁰¹ and join the army. When contacted for his second interview, Dylan had returned to school after doing unexpectedly well in his year 12 exams. Dylan was interviewed a third time to capture his post-school story. By this time he was part way through his first year studying Planning at a North Island university. Like Elizabeth, Dylan grew up on a farm. His father was a farmer and his mother was a manager an hour's drive away from the family farm. Dylan's younger sister was at boarding school. Dylan attended the local Catholic high school in a rural town twenty minutes' drive from his home. Dylan had spent some years boarding at school during weekdays but was living at home by year 13. Dylan described himself as a

¹⁰⁰ Kura Kaupapa Māori are Māori-language immersion schools (kura) where the philosophy and practice reflect Māori cultural values

¹⁰¹ The fourth year of high school in New Zealand. The final year is Year 13.

“bit of an attention seeker” and had been in trouble at school over the years. He had been expelled from primary school, which is why he ended up at the local high school (which started at year 7) rather than boarding out of town. Dylan was motivated by money and had an after school job and operated his own small business in the last two years of school. He enjoyed socialising and described himself as enjoying having fun and “living on the edge”. Dylan was academically successful at school but said he had little motivation for schoolwork.

Analysis of the Stories of Five Young People using Theory of Practice

In this section of the chapter I use Bourdieu’s theory of practice to describe the different types of capital that these young people had access to, how they were able to mobilise their habitus (their ways of being, inherited from their families but continually reconstructed) in the fields in which they were operating. Through this lens, it is possible to identify the structural impediments to young people’s ability to follow through with their vocational goals. The purpose of Bourdieu’s theory of practice is to explain inequality, advantage and disadvantage in society.

Like all of the *Transitions* participants, Gabrielle’s vocational journey began well before she began consciously contemplating post-school decisions. Her choices and options in the field of career seeking were influenced by the resources she had available. Economic, social and cultural capital are primarily transmitted through the family (Reay, 2004a) and Gabrielle’s family had little of the dominant form of any of these types of capital. However, these can also be acquired via schooling and Gabrielle’s parents decided to send her out of their working class neighbourhood to a high profile girls’ school. Gabrielle eventually took on some of the school’s dominant values and developed the goal of upward social mobility, hoping to become a lawyer or a business woman.

Gabrielle’s motivation for a middle class future was encouraged by her parents, who told her that they wanted her to have a comfortable life, unlike their own, which had been a struggle:

And they’ve always told me, you don’t want to end up like us. Just having your average job, and kind of living your average life.

Gabrielle’s high aspirations were augmented by her extended family’s hope and expectation that she would do well:

They want me to succeed but they want me to succeed for myself more than for anyone else. So that makes me want to succeed for them.

This support for Gabrielle can be viewed as ‘emotional capital’, which Reay (2004a) describes as an important facet of cultural capital. Gabrielle’s parents were not able to transmit middle class forms of economic, social or cultural capital but their emotional capital encouraged her to access these other forms of capital from school. And as Gabrielle took on the social and cultural capital of the school she was able to generate economic capital in the form of scholarships, which entitled her to a free tertiary education.

Gabrielle’s high aspirations were fuelled by these forms of capital. However, the process of moving out of one’s class of origin is not necessarily straightforward. Contradictions between possible positions and identities arise when habitus encounters an unfamiliar field (Friedman, 2013; Lehmann, 2014; Reay, et al., 2009). The ambivalence in this process was apparent for Gabrielle. She described her academic success and her desire to take on extra-curricular activities and responsibilities, which were part of her plan to enable her long term success. However, when she was made a prefect, she could not reconcile the expectations of this role with other aspects of her identity and she resigned her position. She said:

And I was, like, it’s not working for me. It’s not the person I want to be. They expect me to be like this high and mighty person. My friends didn’t want to hang out with me. Like some of my friends... Because [they thought] I am a ‘Miss Do Good’ now, and they don’t want to do the wrong thing in front of me. And I’m just, like, that’s not me.

Gabrielle’s feeling of not being able to reconcile her working class identity with an imagined future status of the middle classes is an acknowledged phenomenon sometimes known as ‘parvenu’ (Walkerine, 2003), which describes the sensation of not belonging or feeling accepted in a higher social or economic class. As we will see later in the chapter, Gabrielle’s ambitions were adapted when she became pregnant and chose to put her education on hold for a year to become a sole parent. Perhaps her decision to keep her baby and become a single mother was also influenced by her working class habitus, in which single mothers are possibly more commonplace than CEOs. Interestingly when Gabrielle talked about her imagined future with her daughter, she described her intention to give her daughter everything she needs and wants, including swimming, ballet and

piano lessons. These middle class pursuits were not consistent with Gabrielle's habitus as a working class girl and she said she personally would not participate in such activities. She inferred that such middle class activities might be consistent with her daughter's identity, however.

From a traditional Bourdieu-ian perspective, it might be assumed that Gabrielle's Māori cultural heritage might disadvantage her within the dominant Pakeha culture. However, Gabrielle's cultural identity played a major part in her ambitions. Gabrielle devoted a significant amount of interview time to discussing attitudes towards Māori and her intention to show other people that Māori can succeed. Being Māori was a crucial part of Gabrielle's identity and she described her desire to learn Te Reo Māori as part of her 'self-discovery'. She talked about the importance of her cultural heritage:

I really have a distinctive feeling that is unexplainable about being Māori, you know. Like you feel like it is really, really important to you and you need to know that side of you to know who you are.

Gabrielle refused to apply for any Māori or quota scholarships insisting that Māori are as able as anyone so do not require special treatment. Gabrielle believed that the way forward was to succeed in the dominant culture. She was guided in this feeling by her extended family:

My Granddad told me that what our ancestors realised was that the way to make it in the world was to make it in the white world, and that's why they didn't go hard and make us learn Māori and force Māori tradition on us. Because that wasn't the way to make it, so it was important for me to do him proud. A lot of it [her ambition] has to do with him, I think.

Being Māori was a source of motivation for Gabrielle, wanting success for herself but also for her ethnic group. Yosso (2005) provides another perspective on cultural capital for minority groups, which elucidates Gabrielle's cultural story. It is possible to understand minority group cultural capital as the knowledge, skills, abilities and contacts that allow minority groups to survive and resist oppression. The strength Gabrielle obtained from her Māori culture and heritage motivated her desire to succeed, and was a powerful form of cultural capital to assist her in negotiating the dominant Pakeha middle class culture.

Gabrielle lived in a suburb where most residents were Māori and Pasifika and she attended a multicultural school with high expectations for girls of all cultures. She said she was confident in both settings. Gabrielle's heritage included a New Zealand European side and she described herself as:

The darkest of the white family but the whitest in my Māori family.

It is possible that living between two cultures provided Gabrielle with a particular type of cultural capital, enabling her to function more effectively in the multicultural society of Auckland. Schaefer-McDaniel (2004) notes that one aspect of social capital is having a sense of belonging and attachment to place. Gabrielle had a strong attachment and identification with her Māori heritage but also had a sense of belonging in mainstream school culture. Gabrielle's strong sense of self and reflections on her changing identity as she moved between fields of school and neighbourhood suggest that her multi-cultural identities were an important part of her habitus and provided her with capital in both the educational and neighbourhood fields where she functioned.

Gabrielle's story was a narrative influenced by a complex intersection of gendered, social class and cultural factors. Her journey through the teenage years was complicated and sometimes paradoxical: Gabrielle was at a relative disadvantage in the education system due to her familial SES and lack of social capital. This became compounded when she became pregnant, perhaps compromising her chances of completing her degree. However, Gabrielle was academically gifted, highly motivated to succeed and had the support of her parents. Identity can be influenced by the resources one has available and can influence whether these resources can be mobilised. Despite her relative disadvantage in the fields of education and training, Gabrielle insisted that she had choices and could do as well as the next person. "The ideology of individual choice and responsibility disguises the poor quality of employment for young people" (Burrows, 2013, p. 393). Next I turn to Rebecca, who unlike Gabrielle, had a range of dominant social and cultural capital available but it was not easily transferrable into economic capital.

Rebecca had different types of capital from the two sides of her family. Her father was an engineer providing her with cultural capital in that field, understanding the nature of the work and education required to become an engineer. Rebecca's middle class cultural capital meant that she was comfortable in academic and educational settings and she easily accessed information and support at high school and from the university.

However, she was unable to access social capital from her father because she no longer lived in the same country where he worked. Instead, through her social connections at her mother's bar, she secured some work experience in engineering. Rebecca's social and cultural capital were not supported by a large amount of economic capital. Her parents lived separately and she was largely reliant on her mother, whose business was not particularly economically viable. Before her second interview Rebecca's father became unemployed, limiting the amount of economic support he could provide. Rebecca also did not want to rely on her parents' support and she evaluated her options depending partly on cost. Rebecca's desire to be economically independent interacted with structural factors to reduce her options to those which she could afford, enrolling at university only after she won a scholarship.

It could be argued that Rebecca's social and cultural capital equipped her well to succeed in the vocational field. However, Rebecca's limited economic capital played a crucial role in her inability to continue with engineering. Rebecca did not have the economic resources to enrol into first year engineering, so was obliged to accept a scholarship, which required her to progress past her level of understanding and ultimately fail the course. As Rebecca's story shows, familial economic capital is not always reflective of social and cultural capital and the relationship between these forms of capital is not straightforward. When students are required to pay for their tertiary education, economic capital may have more value than social or cultural capital. In contrast, Elizabeth's story, below, is one where economic capital did not play a role in her decision-making.

Like Rebecca, Elizabeth had access to a range of forms of capital but had an ambivalent attitude to mobilising these. Her parents were retired farmers willing to support Elizabeth's post-school education and her older siblings all had tertiary qualifications. However, Elizabeth did not enter further education after she left school, citing a lack of motivation for school and indecision about long term plans as her reasons. She also liked to be distinctive and independent so not joining peers bound for tertiary study was a way of forging a different identity. In her first and second interviews Elizabeth's goal was to travel and she obtained local work to finance that goal. Elizabeth initially did some seasonal and retail work but by the time of her second interview was employed as a dairy farm hand. In the field of farming Elizabeth was equipped with an abundance of relevant social and cultural capital. Although Elizabeth had not grown up dairying, she expressed

surprise and pleasure at the transferrable knowledge that she had absorbed during her rural upbringing. She said that her knowledge and skills were greater than those of another new employee who had recently graduated from an agricultural course. Elizabeth's capital in the rural field served her well as she continued to work on the farm, increasing her experience and forging a positive relationship with the farm managers. Her confidence and enjoyment of the rural life continued to develop until it became more than a job but an intrinsic part of her identity; Elizabeth consolidated her habitus as a rural working woman.

As Elizabeth built on her childhood rural identity, she became critical of her school peers who had gone to university, saying that all they did was drink, spend and do nothing. She confessed to feeling some jealousy about their care-free lives but overall she was more satisfied with her life:

So I feel that even like my life ... at least I've got a sane grip on how the world works. You need to make money before you spend it. Finance wise I think I'm in a lot better boat than them, I know what I've got and how much I can spend and they just seem to be spending.... They get to go out a lot more than what I thought. But now I suppose it doesn't really matter because I still go out quite a bit, anyway. So, I've still got their life in that little bit that I was sort of jealous of to begin with but I have it in moderation so it's better.

Financial security was important to Elizabeth and she described her attitude to money, which involved saving for the things she needed before she bought them. Since starting work Elizabeth had set up her living quarters on the farm and bought a truck and working dog, all things required in her rural life. She had even managed to incorporate elements of a social life similar to that of her peers which she had initially felt envious of.

Applying the lens of Bourdieu's theory of practice to Elizabeth's story shows how particular capital and habitus are valued in a field and how this becomes self-perpetuating. Elizabeth's considerable social and cultural capital in the rural field enabled her to build up some economic capital, which was considerable compared to that of her peers. While it could be argued that an intelligent young woman like Elizabeth could have been more successful in urban, professional middle-class culture, she was currently more financially successful than her peers, most of whom had student loans. Although she still expressed a desire to travel and complete a photography course, these

were no longer major life goals but reduced to holiday travel and photography as a hobby. Elizabeth's main priority was to live a rural life:

I've decided that I don't want to do anything other than the rural scene but that could be easier said than done. [I enjoy] that rural lifestyle. Yeah, if I could I'd marry a farmer and spend the rest of my life on one.

A combination of Elizabeth's rural upbringing and her interactions in the field of farming meant that she built on her rural habitus and maintaining this life became her goal.

Elizabeth's decision to continue working on a dairy farm may well have paid off economically as well. Elizabeth's interviews were conducted as the dairy industry flourished in New Zealand. If she continued in dairying, she would be in a good position to take advantage of the industry's economic upturn. Given the economic and workforce problems New Zealand faced in the global financial crisis, it is possible that Elizabeth's decision not to go to university might pay off in the long term.

The next story is that of Tia whose habitus has some similarities to those of Rebecca and Elizabeth because she also had access to middle class social and cultural capital via her educated professional parents. However, Tia's story was dominated by the challenges she had encountered at school and university. Like Gabrielle, being Māori was an important part of Tia's identity and she described being grateful for her early bi-cultural education, which made her understand and appreciate her Māori culture. However, Tia found it difficult to deploy her Māori cultural capital in the dominant culture of education. Tia found the transition from Kura Kaupapa Māori to a mainstream girls' school very challenging and although she said she settled in relatively quickly, it took her a long time to enjoy school. She described the transition from her small kura:

It was a bit of a shock. I knew it would be big, but I didn't realise like, all the different types of people, races, you know, I didn't know how to... I sort of got lost in that whole move to mainstream system really.

This was in marked contrast to Tia's experience of her earlier Māori immersion education at a Kura, where Tia described the students as:

Having this understanding and this appreciation of not just being Māori, [but also] of life and they value other people.

Tia implied that these were not the values of the mainstream schools she had attended, making her time at these schools more difficult because her underlying values and habitus were not consistent with those of the institution.

Over Tia's life she had moved between Māori immersion and mainstream education and between living with her father and her mother. When she lived with her father, she attended mainstream schools and both times became stressed. She described the earlier time:

Coming from a Māori school to this big huge new mainstream school ...it was quite hard. [And] I had eczema on my face.... I moved in with my mum after that, so I think it had a lot to do with the lifestyle that I was living and it just wasn't working for me at that moment. Like, you know, I think that's when my father put a lot of pressure on me.

At the end of school, Tia again described pressure from her father as she tried to decide on her plans for the following year. Tia said that the stress from responsibilities at school and pressure from home negatively impacted on her academic performance at school. She was also having trouble deciding on her future as she finished school, so she did not apply for scholarships in case she decided not to study. All of this stress, pressure and indecision culminated in Tia making a last minute decision to enrol in a university Applied Science course, for which she had minimal enthusiasm and had to pay student fees, since she had not applied for a scholarship. Tia said she made this decision because her friend was going to the same institution and, as she said:

I wanted to experience first year at uni. That was really the only thing that I wanted.

She attended the course for the first part of the semester but decided to withdraw from the course after becoming unwell with a skin infection, which also drained her energy. Tia attributed her illness to stress:

I had to withdraw cos I got sick, which I think was really just stress and all sorts of pressure and I wasn't eating great. And studying, it's hard, you know, you just grab a pie when you can (laugh), wasn't good.... I needed to just take time off right then and there and then get back to it when I could. So what I did was, I went up north and stayed with my mum for a few months which did wonders. No smoky Auckland air, no pressure or anything. That's what I needed.

Tia's story indicates the entanglement of identity and resources. Tia had familial cultural capital from her professional parents and she intended to build on this by completing her compulsory education at the girls' school, saying that she hoped to develop more

opportunities and contacts there. However, she was unable to convert this capital into academic and vocational success the following year. After she withdrew from university, Tia said, “I was just so confused as to what I wanted to be, you know *who I am*.” Tia struggled with working out her place in society, which contributed to her stress and ill health. Tia could not reconcile her identity with a potential career at this point in time, despite her considerable middle class cultural capital.

Like Gabrielle, Tia’s familial emotional capital was an important part of her story. The times she lived with her more demanding father were difficult and culminated in illness. In contrast, she was able to rely on her mother to support her at stressful times and, after her last illness, she returned to live with her mother. Taking some time out provided Tia with some clarity and she finally made a decision about her future, stating that her plan to travel, even though it was short term, gave her a goal and something to work towards. With emotional support, Tia worked through her indecision and developed a plan for the future. The social capital she had developed through her relationship with her boyfriend’s family, enabled her to easily obtain a clerical job, which set her on track for saving to travel.

Bourdieu’s concept of the ‘field’ also helps elucidate Tia’s story. The cultural capital valued in her Māori world was inclusive, caring, whanau-based and these were the values she brought to the field of mainstream education. Getting ahead in the post-school mainstream world often requires assertiveness, individuality and a striving personality. In this field Tia’s habitus did not equip her to make the decisive choices required for moving into the next vocational phase. Indecision limited the courses available to her because she did not apply for scholarships and she believed that her vocational indecision contributed to poorer commitment to school, which resulted in lower marks than she was capable of. She also acknowledged that it was difficult to maintain energy across her various commitments. While only one individual, Tia’s struggles were perhaps reflective of the extra challenges faced by young people of minority cultures if their long term ambitions locate them centrally in the dominant culture. It is important not to frame this as minority cultural deficit but instead question whether success should be measured by the standards of white middle class communities.

Like Gabrielle, Tia acquired different forms of cultural capital, via family, whanau and community. This did not necessarily equip Gabrielle and Tia to succeed in the dominant culture as they wrestled to make sense of how their aspirations reconciled with their habitus. The final case study is that of Dylan, whose story differed from the earlier case studies because he was able to mobilise the capital he had access to.

A combination of personal characteristics, economic, social and cultural capital meant that Dylan developed into what could be described as the model ‘neoliberal subject’ over the time that he participated in the *Transitions Project*. At first interview Dylan was planning to enter the armed forces and learn a trade. He had researched the various options and weighed up the costs and benefits, especially in monetary terms. Maximising his income was important to Dylan. He described one of his hobbies as “making money” and his goal was to be rich within ten years. Dylan’s return to school instead of entering the armed forces was because he thought extra qualifications would “open up more opportunities” and he decided to study planning because of the high demand for planners, which he believed would guarantee him a job with a high salary.

A strong commitment to entrepreneurial intentions is predictive of following through with such intentions (Hirschi, 2013). At school Dylan had already developed an entrepreneurial nature. When he decided that he needed to develop his extra-curricular strengths at school, Dylan joined the Young Enterprise Club.¹⁰² At school he had an after-school job, paid work on the family farm, and established a firewood business using trees from the farm. As a university student Dylan also put his entrepreneurial skills to use. His parents were able to manage their finances so that Dylan was entitled to a student allowance, which together with his savings covered his living costs. This enabled him to invest the money from his student loan. He also intended to start a property portfolio, buying a student flat and paying off the mortgage with rent from flatmates. Dylan’s interest in money was also reflected in his consumer behaviour. He had the “expensive” hobbies of socialising and drinking and described his social life as the most important thing in his life. He acknowledged that this had negative impact on his study commitment and results and was concerned that his lifestyle might not be good for his long term health.

¹⁰² The Young Enterprise Scheme was established in 1981 by the Young Enterprise Trust to encourage school students to experience enterprise education and financial literacy programmes.

Like Elizabeth, Dylan's family and rural background supplied him with social and cultural capital, which he was able to convert into economic capital. Unlike Elizabeth, however, Dylan's ambitions fell outside the rural field. He intended to work as a planner while simultaneously operating some business ventures. Research suggests that an entrepreneurial family history stimulates desire for future generations to become business-orientated (Liñán & Javier Santos, 2007). Dylan had witnessed and described the profit from his father's strategic diversification of stock in response to difficult economic times on the farm. Dylan's family also provided support in his firewood business, supplying him with equipment and making suggestions. Via his family connections, he acquired a well-paid holiday job on a farm and his farming experience meant that Dylan easily accessed casual farm work in the rural area around the university city where he studied.

Dylan's interest in and ability to make and spend money was intensified by his personal attributes. He described himself as independent, confident, practical and he enjoyed pushing the boundaries, all characteristics valued in the neoliberal job market. In a neoliberal context dominated by precarious employment contexts, traditionally masculine characteristics of competition, confidence and entrepreneurship are required (Ringrose, 2007). However, Dylan described earlier problems with authority and had been in trouble at school because of his attitude and behaviour. Dylan was aware that these traits could be a liability in some settings, particularly if he was employed as a planner. He described a need to improve his organisational and time management skills and explained how he had harnessed his more volatile characteristics:

D: I actually think I've come quite far, like, I come from being a wee little shitbag to being in the quite top range of the planning students at this university for my year. So I'm pretty happy right now, from what I've come to.

Int: So when you say you were a little shitbag, how do you mean?

D: I used to be an angry kid ay [laughs]..... I'm now a lot more controlled and I'm a lot more, I don't know, I can say I've lost all my, I can say a lot more for myself now than I could ten years ago.

Dylan showed a strategic attitude to the future job market he would find himself in by working to minimise his potential flaws and maximising his strengths. Dylan was able to

reflect on his identity and activate the aspects that would be most conducive to meeting his goals.

Like Elizabeth, Dylan's rural capital had served him well. They also shared an interest in financial security. Unlike Elizabeth, Dylan chose to move out of the rural sector and go on to university with the intention of meeting his professional and economic goals.

However, we do not know whether the acknowledged negative health consequences of his current lifestyle negatively impacted on his ability to meet his long term goals.

However, Dylan's story shows how the combination of resources and personal characteristics can come together to provide a path to potentially fulfilling one's aspirations.

As I noted in Chapter Seven, Bourdieu's theory of practice emphasises social class and the differential resourcing of capital as the primary sources of inequality. However, Bourdieu also acknowledged the role of gender in social inequality. I now revisit the stories of three of these young women to investigate the role of gender in their vocational behaviour.¹⁰³

Analysis of the Stories of Three Young Women Using a Postfeminist Sensibility

Postfeminism is characterised by an amalgam of feminist and anti-feminist sentiments. These are a feature of Gabrielle's story. Gabrielle was driven to be successful in occupational areas traditionally associated with men: she wanted to be a CEO of a large company but also contemplated law and had an interest in pursuing politics. Gabrielle had no interest in feminist politics, however. Gabrielle said:

I hate women's issues, ay like, I'm like, 'whatever, you know'. But I really like Middle Eastern countries, the women there, their stories.

Gabrielle clearly differentiated the stories of individual women from any idea of collective issues for women. Her disregard for women's issues was reflective of a particular type of postfeminism, viewing the battle for gender equality as a 'done-deal' and no longer needing to be addressed (Hall & Rodriguez, 2003). And, with no

¹⁰³ The stories of only Gabrielle, Elizabeth and Rebecca are included here. This is partly to give comprehensive and detailed analysis to these three stories rather than an overview of all four. It is also because the gendered aspects of Tia's story were secondary to the importance of ethnicity.

allegiance to a collective feminism, obtaining success became Gabrielle's individual responsibility. Gabrielle's long term goals were to have financial security and eventually own a big business or company. She was vocal in her insistence that the New Zealand system does not help people get ahead, but requires individuals to work hard and get qualifications to get better jobs. Gabrielle described how she had committed the last two years at school to doing just that. She worked hard academically and was strategic in her extra-curricular activities at school, in order to obtain the best scholarships for university. In these respects, Gabrielle could be seen as personifying the 'young woman neoliberal subject' (Gonick, 2006; Walkerdine, 2003) who believed that her upward mobility would be determined by her hard work and commitment.

However, pregnancy disrupted Gabrielle's neoliberal success story part way into her first year studying business. Despite having to defer her scholarship and delay returning to her degree, Gabrielle said:

My life could be a hell of a lot worse. I could be 15 in high school and having babies, so I think it is... I think it's a good time in my life, you know. I stopped partying, stopped doing this and that. Got my priorities right. Ah, a hell of a lot more determined than I ever was so, you know, it is a good thing for me.

Gabrielle's interpretation of her pregnancy as an opportunity reflects a postfeminist perspective in neoliberal times where mistakes or problems are viewed as one's own responsibility or fault, which she reinterpreted as an opportunity or a positive choice (Baker, 2010).

Gabrielle's discussion about her pregnancy also contained contradiction as she made sense of its implications. She maintained her strength and independence as she described refusing to be a 'charity case' but elements of doubt and indecision crept into Gabrielle's story. She spoke of poor health and the economic stress of her pregnancy, but the crux of Gabrielle's story was to justify to the interviewer, and maybe herself, that having a baby at this stage in her life was a new source of inspiration:

Because pregnancy was the motivator for me. I knew when I had someone that I needed to provide for the rest of my life and that a good education, a good qualification, sorry, was just one way that could be better.

Gabrielle reframed her goals to focus on the well-being and future of her daughter. She no longer imagined herself as a CEO but stated that she now needed to realign her

priorities. While she still hoped to own a house and live comfortably, Gabrielle adapted her other ambitions to provide for her daughter.

Gabrielle's story suggests the complexity of gendered relations for young women. She was an independent, intelligent young woman with high aspirations but when she became pregnant, Gabrielle found that she would need to compromise these aspirations. The ideal of 'girls can do anything' can become daunting if this means women are required to do *everything*. Research suggests that this is what young women see around them, as women continue to do more of the unpaid caring and domestic work along with their paid work (P. McDonald, et al., 2011; Pomerantz, et al., 2013; Sanders & Munford, 2008). Gabrielle suggested her other option was to have a significant other to support her. At one stage in her interview Gabrielle reflected that although things had not worked out with her daughter's father, there may well be a "Mr Right" somewhere in her future and she might get to live the "white picket fence dream." The importance of a romantic partner is revisited in the stories of Rebecca and Elizabeth.

Rebecca was another young woman who hoped to combine aspirations for a traditionally male occupation with having a family. At the time of her first interview Rebecca was deciding between doing officer training in the army and studying engineering and eventually elected to apply for engineering. Women are particularly under-represented in engineering and technology fields (Schoon, 2001). In 2001 only 4% of the engineers in New Zealand were women (Statistics New Zealand, 2012). Schoon et al (2007) found that males are more likely to drift into the sciences, while women who follow science careers have maintained science-related aspirations from an early age suggesting that women require an earlier and greater commitment to their science aspiration to succeed in science careers. Research also indicates that women entering the sciences are under-prepared compared to their male colleagues (Iskander, Gore, Furse, & Bergerson, 2013). In Rebecca's case, these were not factors in her inability to follow through with engineering. She described "loving" science and chemistry and had thought long and hard about how she could make a viable career from this passion. Rebecca was not under-prepared for studying at university. She had done work experience with an engineer and talked extensively with her father who was a mechanical engineer. Academically she was perceived as capable and was advanced into second year

engineering. These, then, were not the reasons that Rebecca was unable to succeed in engineering.

There were gender-based explanations which contributed to Rebecca's exit from engineering. She made reference to the competitive nature of the students and described feeling isolated because there were only three students who had been fast-tracked to the second year. However, she suggested that it was her shyness and the difficulty of the course that made it hard to make friends. She said the engineering students were 'quite nice' but the Engineering Faculty where Rebecca was enrolled was notorious for its disorderly, alcohol-dominated socialising, which was subtly referred to in the interview in this way:

Int: Engineering is known for its...

R: Social aspects, yes, but most of those are alcoholic...And, I was a bit shy and pretty worn out, and a lot of the time the second year was so full-on, we did not have that much spare time.

Rebecca never mentioned the male domination of her course, or that this was part of the difficulty. In a postfeminist society, this is 'supposed' to be irrelevant, despite ample evidence that there are challenges for women working in male-dominated occupations (Beck, et al., 2006a; Murray, 2004a; Tinklin, et al., 2005). In a postfeminist era young women believe that they have equal opportunity to enter male-dominated occupations (Baker, 2008, 2010). The fact that women are not entering these fields becomes understood as a personal choice. Tradition, structural inequality nor issues of workplace culture are not recognised as restraining women's choices. Rebecca's story reflects the complexity and paradox of postfeminist thinking – she aspired to a career in a male-dominated field but did not articulate the gendered challenges that might entail.

Despite her previous academic success, Rebecca insisted that the challenges she faced in engineering were dominated by the difficulty of the academic work, particularly her inability to grasp the calculus required for second year engineering. Rebecca's NCEA¹⁰⁴ mathematics score combined her statistics and calculus marks, which she believed obscured her lesser understanding of calculus. Rebecca's combined mathematics scores were interpreted by the university engineering faculty as an indication of her overall

¹⁰⁴ NCEA (National Certificate of Educational Achievement) is the national qualification system in secondary schools in New Zealand.

mathematical ability and she was promoted to second year. The secondary school system measured mathematical skills in a way that meant that the level of Rebecca's specific mathematical skills were unclear compared to what was required for the tertiary course. This set her up for failure. Research suggests that one of the reasons that women are under-represented in mathematics-based sciences, is that fewer women perform at elite levels in mathematics (Ceci & Williams, 2011). While it is important not to generalise from one case study, perhaps systemic features of how mathematics learning is measured and presented to potential students and tertiary institutions may influence the relative lack of success for women in elite mathematics.

The causes for Rebecca's inability to proceed with engineering reflect many of the reasons that women are under-represented in science-based careers. Structural factors, namely the difference between school and university mathematics marking systems and the university system of fast-tracking gifted students made it difficult for Rebecca to succeed academically despite her obvious ability. Her expectation that gender would not be a factor in assimilating into the course reflects a postfeminist perspective. Such a view is not consistent with the reality of male-dominant courses, which often continue to have hyper-masculine aspects, providing challenges for women (and some men) enrolled in them (Sparkes, Partington, & Brown, 2007).

Rebecca's story echoes that of several of the high achieving female *Transitions* participants who felt that they needed to succeed in all aspects of their lives, reflecting the postfeminist and neoliberal pressures on women to take individual responsibility in both economic and domestic spheres. Advances in gendered relations have done little to change women's responsibility for domestic and child-rearing responsibilities (Craig, 2006; Sullivan, 2000) and many young women expect this to be their future as they see their mothers and other women juggling work and domestic responsibilities (Jones, et al., 2004). The female *Transitions* participants either aimed for flexible careers or imagined taking some time out from their occupations to undertake family responsibilities. Rebecca imagined that her working life would change when she had a family. Her ten year plans were focused on having a family and she imagined her priorities at that time:

I want to still be working part-time if those kids are still young, or back to full-time if they're a bit older. And maybe even possibly doing part-time Masters or something.

Fertility choices and work-home balance have been identified as crucial factors influencing women's underrepresentation in science-related occupations (Ceci & Williams, 2011).

The unspoken foundation of Rebecca's imagined domestic life, described above, was the presence of a partner who would support her and her children, while she withdrew from full-time work. Rebecca's desire for a significant other also had a romantic fantasy component. In her first interview she described how she would like to have a boyfriend. By the time of her second interview she had a boyfriend, who had a major part to play in her life, and she said spending time with him was "the main thing". Rebecca's story reflects the postfeminist juggle – a desire for the traditional romantic relationship where women prioritise male partners and children while independently forging a professional career.

However, Rebecca was not blind to gendered relations. She was one of the few *Transitions* participants who made direct reference to issues of sexism. When Rebecca went to do five days pre-training for the army, she said she loved it but decided it was not for her. When she was queried about this, Rebecca said:

What didn't I like? I don't think you're supposed to question very much. Um, secondly I guess I wasn't physically fit enough. Um, but I loved it... [It was] not quite racist, but they're very.. they're not even – I think they're sexist, but they hide it. And they're definitely very scared about homosexuality. Yeah, I don't want to be around people who are like that.

Rebecca's reflection suggests that she noticed three different sources of discrimination (ethnicity, gender and sexuality) within the hierarchical nature of the armed forces. Interestingly, she did not acknowledge the discriminatory processes at play in the academic setting of the university. Perhaps this is because discrimination is more disguised in institutions dominated by the middle classes. In such settings gender inequality is more likely to be disguised because "a commitment to diversity hides systematic privileging of heterosexual white males" (C. L. Williams, 2013, p. 622).

Rebecca's story indicates how well-resourced, motivated and extremely intelligent women can fail to thrive in male-dominated fields and how complex gendered relations

can be in postfeminist times. Next Elizabeth's story also suggests how young women manage traditional and radical ideas.

Like many of the *Transitions* participants, Elizabeth's identity contained elements of contradiction. She was forthright and was a leader in her peer group and football team but, as the youngest child, was continually battling the impression held by her older siblings that she was too young to make her own decisions. Underneath Elizabeth's steadfast independence was some vulnerability and several times she approached the school counsellor for advice and support even after leaving school.

A feature of Elizabeth's story was her desire for a romantic relationship with a male and this impacted on how she imagined her vocational (and other) future. This was apparent in each of her interviews and seemed somewhat incongruous with her success in a physically demanding male-dominated occupation (farming) and sport (football). At the time of her second interview, she had a boyfriend and she talked in detail about the importance of this relationship, which had finished by the time of her third interview. Elizabeth invited her boyfriend to live with her when she moved to a house on the farm where she worked. Later Elizabeth described his lack of respect for her, their home and her workplace. She described the relationship this way:

He was emotionally abusing me, too in a way, so it was just a relief [when he left]. Like it took a lot to get over because I was so annoyed with myself for letting that happen for so long. But since then I've never been happier. It's been really great since he's gone.

Despite her negative experience, Elizabeth continued to yearn for a traditional heterosexual relationship, which became incorporated with her desire for a rural lifestyle and vocational future. When asked about her long term goals, at each interview Elizabeth became more definite about a desire to be married with children and by her third interview, she said that, by age 28, she wanted to be:

Married and have a kid, in that order, married, then kids. Very important, the horse before the cart!

Elizabeth's desire to combine a traditionally gendered future with her current unconventional role as a football playing farm worker can be interpreted several ways via

a postfeminist sensibility. Firstly, there is some pleasure and satisfaction in behaving in a traditionally gendered way and traditional female roles can be reinterpreted as a willing choice in a postfeminist world, where women are ‘free to choose’ any role, including ‘wife’ (Gill, 2007). Not adhering to traditionally gendered behaviours and appearances opens up the possibility of being ridiculed or possibly challenged on one’s sexuality (Rich, 2005). Elizabeth’s independent nature, physical strength, job and sporting interests left her open to challenge as a ‘non-appropriate’ female, especially in a conservative, rural community. Perhaps being open about her desire to marry quelled any question about Elizabeth’s status as a heterosexual female. It is also possible that Elizabeth’s aspiration reflected the habitus she inherited from her family and community. Thomson and Holland (2002) suggest that it is hard to imagine a future outside a normative model. Elizabeth came from a traditional Catholic family and although she liked to be independent and rebel from her family, she also sought their approval. Marrying a farmer and having children would replicate the life of her mother, which would earn her family’s approval. Alternatively, Elizabeth may have seen this ‘traditional’ goal as rebellious in a postfeminist world. Her school peers were all studying for professional qualifications, the mark of success amongst the dominant middle classes. Eschewing those goals could be interpreted as non-conformist and individualist. It is also interesting to reflect on the absence of any discussion by Elizabeth that her long term goals could include being a farmer rather than a farmer’s wife.

These three stories revealed some of the ambiguity in the lives of young women as they craft their identities and develop a career alongside their other goals. Interpreting their interviews with a postfeminist sensibility showed that young women are subject to a vocational world where postfeminist ideals of equal opportunity across a range of occupations may not equate with the reality of the unchanging gendered workplace and clash with their traditionally gendered discourses and dreams. Other recent research also shows that many young people maintain traditional expectations around marriage and family (Skrbis, et al., 2012).

Conclusion

The stories of these five teenagers show some of the complexity of attempting to meet one’s vocational aspirations. By the time of their last interview, none of these young people were doing exactly what they had hoped at the time of their first. Cultural and

economic resources along with identity interact in complex ways to enable or undermine the possibility of fulfilling vocational aspirations. Bourdieu's theory of practice is useful for explaining social reproduction and the uneven allocation of resources across society. This data shows that accessing one's capital is a complex process, requiring reference to individual characteristics and the wider social context to be understood.

Each of these young people had a range of resources on which to draw as they strove towards their goals. Four of the participants who were the focus of this chapter came from relatively middle class families and had access to middle class social and cultural capital, along with varying amounts of economic capital. Only Gabrielle was from a working class family but was able to mitigate this disadvantage with educational cultural capital. All had supportive networks providing emotional capital. Nonetheless, each of these young people faced challenges that inhibited their progress towards their original goals as they struggled to mobilise the various forms of capital that they had access to. Aspects of their identities, such as Dylan's volatile nature and Elizabeth's desire for a traditional romantic relationship had potential to impact on their success in meeting their goals.

Fitzsimmons (2013) states that success in a field is determined by whether the capital being generated in an individual's habitus is valued by the field. When resources and identity are consistent with future goals, aspirations are able to be met or even exceeded. Dylan's story exemplifies this: Dylan's middle class family provided him with social, cultural and economic capital and an entrepreneurial trait, which meant that he ended up attending university working towards his goal of being a wealthy planner, rather than learning a trade in the army. When the capital of one's habitus is not valued in a particular field it may be difficult to succeed or even make sense of the field. This was evident in the case of Tia, who struggled to reconcile her understandings and abilities in mainstream educational fields. Likewise, despite her middle class aspirations, Gabrielle continued to resist some of the middle class values she encountered because they did not 'fit' with her working class habitus. In comparison Elizabeth and Dylan had no trouble fitting into the post-school worlds in which they found themselves because they closely resembled their families' worlds.

This is not always deterministic, however; it is possible to move out of one's class of origin and there is potential for change. When habitus encounters a field with which it is not familiar, the disjunctions can generate change and transformation (Reay, 2004b).

This potential for change can be seen in the stories of these young people, who changed their plans and actions as they encountered situations that either complied or contrasted with how they understood the world. For example, after struggling with academic and social challenges, Rebecca could not continue with engineering and changed to a different course of study where she experienced success and potentially still meet her more general goal of a career in science.

Fields occur within a social and historical context which also influence whether young people are able to meet their aspirations. In this chapter I have shown that the role of gender was a particularly salient aspect of the social context, where the gains of second wave feminism in the 1970s and 1980s might have been expected to have minimised gender inequality. Instead, gender was an integral factor in understanding the difference between aspirations and occupations for these young women. In a postfeminist society, young women are believed to have equal opportunity and their success is understood to be solely determined by their hard work and commitment. However, the gendered story is more complex than this. Overall women may be outperforming men in education but this is not reflected in the workplace (Cuervo, 2012; McRobbie, 2007) and research shows that having children has a detrimental effect on women's careers but not men's (Abele & Spurk, 2011; Fitzsimmons, et al., 2013). When viewed with the lens of a postfeminist sensibility, the young women's stories at the beginning of this chapter indicate a complex combination of traditionally female desire, disregard for issues of gender and a declaration of individual responsibility for outcomes. Postfeminism has provided a context where the power of traditional gendered relations may have even more potency because they are concealed within a society that is now assumed to be equitable. Within this context there can be no appeal to inequitable gender systems, processes and attitudes to explain stereotypical occupational outcomes.

Chapter 10

Conclusion

The purpose of this thesis was to investigate the relationship between teenage vocational aspirations and adult occupations, and to better understand the processes involved in vocational behaviour. In this chapter I reflect on the research process and the limitations of project. I then summarise the key findings and conclude with a discussion of the implications of the study.

Reflections on the Research

Some of the apparent limitations of this project were also its advantages. The datasets came from different eras and theoretical and methodological perspectives. This provided challenges in how best to analyse each project coherently to allow data to be compared across studies while simultaneously doing justice to and remaining respectful of the aims of the original projects.

The data from all of the projects were collected for different purposes from the use they have been put to here. While it could be argued that the *Transitions Project*'s founding philosophy is consistent with revisiting the data, the original researchers never envisaged the data being compared to longitudinal data from other projects with which they had no connection. The *Pathways Project* data was collected for a specific purpose: to provide information to a government ministry on teenagers' aspirations in the 1980s. It is possible that the researchers imagined that the data might be available one day for comparison to adult *Dunedin Study* data but they certainly would not have expected it to be interpreted by comparison with qualitative data from a research project conducted in the twenty-first century. However, revisiting the data from these projects was consistent with a constructivist epistemological position, where interpretation of data from different positions may provide new insights. As Goodwin and O'Connor (2005b, p. 217) state, "Interrogat[ing] historical data with contemporary ideas and concepts has obvious value and can change (or contribute to) previous understandings of the social world."

Researching this topic from a constructivist perspective using multiple methods enabled me to show the complexity of vocational behaviour and acknowledge the many factors that impact on young people, rather than becoming entangled in the detail or having

differences masked by generalisations (Raffe, et al., 2001). The constructivist approach with a critical theory perspective also allowed me to view the significance of structural features alongside individual trajectories. It is the structural level that requires reflection and change for inequity to be exposed and challenged.

The original intentions and aims of the three different projects determined the data collection methods. All have their limitations. Positivist methods require classification, coding and numerical analysis which can obscure detail and negate difference. Interpretivist methods can be overly theoretical, difficult to relate to real life and not generalisable. The different methods require different perspectives, ways of assessing their reliability, validity and usefulness, and may use different languages (Rist, 2006).

The positivist research perspective of the *Pathways/Dunedin Study* data required quantitative methods. Although occupations were categorised using well-established methods both the NZSCO and the system for coding the gendered nature of occupations required interpretation of participants' intentions before coding could occur. It could also be suggested that there is some element of a self-fulfilling prophecy to require a large proportion of each gender working in a particular occupation to categorise the occupation as gendered. However, I was largely able to address this concern by using the historically gendered categories to compare the *Dunedin Study* members' gendered adult occupations with their teen aspirations. This meant that change in gendered occupations over time was not a factor in the analysis of difference in gendered occupations between aspirations and occupations.

The *Dunedin Study* members were interviewed about their occupations. This was a standardised interview but required detailed description of the tasks and duties they performed, as well as their job title to be coded by interviewers using the NZSCO system. There are matters of judgement involved in the coding process and the NZSCO system includes some inherent problems (as described in Appendix 6) and the amount of detail and description individuals ascribed to their occupations varied considerably. The detail recorded by interviewers also varied. It is also important to remember that *Dunedin Study* members undertook a full day of assessments and the interview about work occurred in the afternoon when some participants' enthusiasm may have been waning. The *Pathways Project* participants were surveyed at school. They completed the questionnaire

themselves, which meant that there were potential problems of literacy and comprehension.¹⁰⁵ It is also impossible to know how seriously the *Pathways Project* participants took this process, whether they answered honestly, were under time pressure, influenced by peers or compromised by the classroom setting.

The *Transitions Project* data were collected in a research paradigm that encouraged multiple methods and theoretical perspectives. The *Transitions Project* participants were interviewed but their interviews contained different challenges to those of the *Dunedin Study*. Firstly, the semi-structured interviews produced varying amounts of data. This depended partly on the participants, some of whom were more verbose than others but also on the interviewers, who were able to build differing amounts of rapport with interviewees. Despite their training, the peer researchers generally had shorter interviews because they did not invite elaboration to the same extent as the adult interviewers (see Nairn, Higgins, & Sligo, 2007 for more detail). And, very long and full *Transitions Project* interviews also presented challenges in how to analyse and respectfully report data without losing detail.

Using two different methods (Chaos Theory of Careers and narrative analysis) to analyse the *Transitions Project* data meant that a range of possible explanations for the difference between teen aspirations and adult occupations were identified. My intention was to provide some insight into what happens between aspirations and work outcomes over time. The goal was not to provide a definitive answer to why many young people do not meet their aspirations.

The Chaos Theory of Careers (CTC) provides an under-utilised tool for conceptualising patterns of vocational behaviour, which appears to have practical applications. A recent journal dedicated to the ten year anniversary of the emergence of CTC described the effectiveness of including a CTC perspective in career counselling (Law, Amundson, & Alden, 2014; McIlveen, 2014a) and detailed the theoretical advantages of CTC (Amundson, et al., 2014; McIlveen, 2014b; Pryor & Bright, 2014). However, only one article (Borg, et al., 2014) reported the use of CTC as a theoretical tool to interpret data in an empirical study and its focus was on the influence of unexpected or chance events.

¹⁰⁵ Although, some participants had adult assistance, which can also cause problems with confidentiality and/or suggestion.

The comprehensive use of CTC to explain the influence of chance events, contextual factors and the impact of young people's style of attractor on vocational behaviour in New Zealand is unique to the current study, although Campbell (2011) uses CTC to explain the vocational behaviour of 47 Canadian research participants in the decade after they graduated from high school. The understandings derived from the CTC approach was enhanced by the narrative component of the analysis, which enabled me to attend to some of the power differentials that impact on young people's potential to meet their goals.

A further point to take into consideration in considering the results of this study is the selection of the cohorts. The *Pathways/Dunedin Study* cohort is a birth cohort recruited into the study by their parents and was reflective of the Dunedin population at the time. The *Transitions* participants were recruited via researcher invitation at schools and educational settings, snowballing and informal networks. As a result, they were not a generalizable sample and were not intended to be. However, this voluntary inclusion in the Study meant that there was an underrepresentation of males. It is also important to remember that only 73% of the *Transitions Project* had a second interview, which constrained the potential choice of case studies for the narrative analysis. While 73% is not a poor follow-up, males were again disproportionately under-represented in the second interviews. This project generally focused on the plight of young women when analysing gendered vocational behaviour. In future research it would be valuable to obtain more information about young men's perspectives to gain a greater understanding of their vocational trajectories.

The comparison of the *Pathways Project* and *Dunedin Study* aspirations and occupations was not inhibited by issues of retention because I was able to include all participants with full data from both studies in the comparisons. However, this meant that some participants needed to be excluded because they did not have either full *Pathways Project* or *Dunedin Study* adult work data. I also made the decision to include age 26 work data for those who were not in paid employment at age 32. Other participants were excluded from only some analyses because their aspirations were not able to be coded with NZSCO

codes.¹⁰⁶ Most notably, it was impossible to statistically compare boys' gendered aspirations with their adult gendered occupations due to the very small numbers of boys who aspired to occupations that were not male dominant. These data inclusion and exclusion decisions may have influenced the results. The inclusion of all possible participants for each analysis also generated complications because the cohort size changed for different analyses, perhaps creating extra challenges for the reader, too.

Perhaps the most significant limitation to this project is the inferred value judgement concerning occupations. This is an inherent problem with the NZSCO system where occupations are coded across a continuum from occupations that are highly paid and esteemed, requiring extensive qualifications to those which are lowly paid and 'unskilled'. Of course, this is a value judgement which assumes that higher paid professional and managerial work is desirable and advantageous. Having occupational aspirations may be important for those who hope to work in professional occupations but it is not clear that this is inherently a good thing. It may well be the case that many people prefer to balance the comparative benefits of remuneration and work-life balance. More research is required to investigate whether having these types of occupation makes people any happier and healthier in the long term than those in other types of occupations. It is also important to reflect on other possible ways to measure the value of occupations, rather than using salary and education as the defining factors to stratify. This project has offered another source of comparison via the gender analysis but further analyses could focus on other components of occupations such as contribution to social capital or value to community.

This section has shown that there were limitations to all of the methods used but overall using a range of methods was an asset to the project. They were brought together within a constructivist epistemology, which allows for data to be understood in different ways. The multi-method comparison of teenage aspirations and adult occupations was able to provide some interesting insight into vocational behaviour, which I summarise below.

¹⁰⁶ The justification for this was to ensure the inclusion of as many participants as possible and to avoid excluding people based on illegible handwriting or general responses.

Key Findings

A quarter of the *Pathways Project* participants had no specific job in mind when they were asked about their future careers. These young people did not significantly differ from the rest of the cohort in terms of gender, SES or IQ. However, as adults they were significantly less likely to work in professional or managerial careers. The *Pathways* participants who did have specific occupational aspirations aspired to a relatively small number of mostly professional or technical occupations that were generally well-known careers. Nearly all of the young people with a specific occupation in mind thought that they had at least a fair chance of obtaining that job.

The *Dunedin Study* adult occupation data showed that most people did not work in either of the jobs that they aspired to (the *Pathways* questionnaire asked for two choices for preferred occupation). Only 16% of those with aspirations worked in either of the jobs that they had aspired to as teens. Teenage aspirations were important, however. Having any aspiration was predictive of having a professional or managerial occupation as an adult and aspiring to a professional occupation was associated with working in higher level occupations, perhaps reflecting an orientation to the future, which guides current choices and decisions. Familial SES was more of a factor for girls than boys in their chances of obtaining work in higher level occupations. The proportion of adults working in professional jobs was less than the proportion of teenagers who aspired to professional occupations. The decrease in professional adult occupations compared to teenage aspirations was offset by an increase in the proportion of managers and unskilled workers. However, ‘professionals’ remained the NZSCO category with the greatest percentage of adult workers.

There was a notable difference in the gendered aspirations of teenage girls and boys. Nearly all the boys aspired to male-dominant occupations while over half the girls aspired to occupations that were not female-dominant. Female *Pathways Project* participants who aspired to male-dominant occupations were aware that it might be more difficult for them to meet their vocational aspirations. They were less likely to be confident of their ability to secure these jobs than the girls who aspired to female occupations. This implies an acknowledgement of the potential difficulties of working in a traditionally ‘male’ occupation.

Dunedin Study members' occupations were also differentiated by gender. Women were significantly more likely than men to work in managerial or professional occupations. Men worked primarily in male dominant occupations, of which there were many more than female-dominant occupations. The proportion of men working in male-dominant occupations was smaller than the proportion of boys who aspired to male-dominant occupations but only one in nine of *Dunedin Study* men worked in occupations that were female-dominant. Women were more likely than men to work in occupations that were not stereotypically gendered but a slightly smaller proportion of women worked in male-dominant occupations than the proportion of girls who aspired to them. One in three of the *Pathways Project* girls aspired to male-dominant occupations and only a quarter of women worked in such careers. Over half of the *Dunedin Study* women worked in female-dominant occupations. There was a social class difference for the women who worked in male-dominant occupations: their occupations were more likely to be managerial and professional. Those women who were working in 'non-female' occupations were more cognitively and economically advantaged on average than the women who worked in traditionally female occupations. Women from working class backgrounds were less likely to work in professional occupations as adults, suggesting that SES and gender have a dual role in preserving traditionally gendered employment relations.

In the 1980s girls had been told that they could 'do anything' and it seems that many of them hoped that they would, while acknowledging the potential challenges. In between times, the social context provided a dominant view that gender inequality was a thing of the past as more women acquired tertiary education and entered the workforce. However, the narratives of the *Transitions Project* participants suggests that 'freed' from the constraint of traditional female roles, young women inherited expectations and pressure to succeed in both traditionally male and female domains. Failure to do so remained the responsibility of the individual. A postfeminist theoretical lens showed that negotiating and balancing personal, academic, vocational and romantic responsibilities and expectations in a social context of presumed gender equity was a challenging process for young women.

The *Transitions Project* data also provided some insight into the reasons that most *Dunedin Study* adults did not work in the occupation(s) that they aspired to when they were teenagers. The Chaos Theory of Careers provided a theoretical lens for understanding the structural and unique circumstances young people encounter and respond to. There are many influences on teen vocational behaviour, making career paths complex and subject to non-linear and unpredictable outcomes. Chance, unexpected and unplanned events influenced *Transitions Project* participants' ability to follow through with their vocational dreams and plans. They were also susceptible to a range of contextual factors that influenced the vocational options that were available to them. These included their relationships with other people, the resources in their local environment and the wider political and economic climate. Individuals responded differently to various challenges and privileges. Being caught in indecision, overly focused on one goal, or suspended between options in early vocational decision-making may develop styles of response over time that make it difficult to adapt to future change.

Narratives of five *Transitions Project* case studies showed the complexity of young people's vocational behaviour. There was a myriad of factors that influenced the options available and potential responses. Bourdieu's theory of practice provided a theoretical lens for understanding this: to achieve success in the fields of education and work, young people require cultural capital valued in those fields. It is not always easy to access the appropriate cultural capital. And when possible success in a field is inconsistent with habitus, individuals may adapt their goals to realign with their understandings of themselves. Issues of class, ethnicity and gender should not be neglected in the analysis of vocational behaviour because of their vital role in the disparity of access to resources. The current neoliberal context provides an illusion of equity of access to more and better educational opportunities for school leavers with the long term promise of a successful career for those with an appropriate work ethic. Young people may end up thinking that their success or failure is their individual responsibility or fault because sources of inequality are disguised under an overarching framework of individual freedom, choice and responsibility.

The results of this study confirm that vocational behaviour is complex and context dependent. The path from aspirations to occupations depends on different situations, resources and contexts that young people encounter. They possess variable amounts of

cultural capital with which to face these challenges. It is important for young people, their teachers, parents and employers to understand that vocational journeys vary depending on resources available to young people in different fields of endeavour.

Implications

The Chaos Theory of Careers suggests that young people's initial responses to the events and contexts they encounter on their vocational journey may determine their future vocational behaviour as they develop patterns of response. Some potential responses are closed, where individuals become focused on only one possible outcome, or vacillate between two possibilities, or have extreme vocational indecision. Stress and anxiety may result from such responses. The consequences of not traversing the vocational path with an open style of response can include other negative outcomes as the *Transitions Project* data showed. Different styles of vocational behaviour resulted in debt, relationship difficulties and health problems, thereby increasing the challenges in the ongoing process of vocational decision-making. Alternatively, developing a style of open response allows individuals to be guided by their interests, values and skills to create order out of the range of events and experiences they encounter. To encourage an open style of response, young people require quality information about different vocational options. Some young people, particularly those from lower socio-economic groups may require more information from schools and other institutions to provide them with a wider perspective of available occupations. Access to different types of information about qualifications and occupations from a range of training institutions and at different ages may also contribute to a greater range of young people finding work in occupations at all levels. It also seems that young people need more information, guidance and support about occupations traditionally performed by the other gender to make such occupations viable options for both males and females.

The *Pathways Project* and *Transitions Project* data suggests that many young people have poor knowledge about the nature of different jobs and what is available in the workforce. And, due to the rapid change in technology and the nature of training and employment, this information needs to be current and continually updated. The information also needs to be timely so that young people can have appropriate academic qualifications and life experiences for their future careers. Studies have found that many primary school aged children have well-developed ideas about their future occupations

(Bandura, et al., 2001; Hartung, et al., 2005; Wahl & Blackhurst, 2000) so vocational education needs to begin in primary school when children first start thinking about future jobs. By the time New Zealand students currently receive vocational guidance they are at high school, when subject choices may have already made some careers unattainable.

The *Pathways Project* data showed that having specific teenage occupational aspirations are predictive of adult occupational level. This supports the argument for early quality vocational information to assist children and young people in making informed decisions about their vocational futures: young people need information to decide what their career could be. However, vocational guidance counsellors also need to be aware that having a focus on one particular goal (or operating with a ‘point attractor’ in Chaos Theory of Careers terminology) may not be conducive to encouraging open responses to the systems in the wider environment. So, there is a fine balance between identifying aspirations while remaining open to other opportunities and situations. The Chaos Theory of Careers may have much to offer in assisting young people in understanding this and could be a valuable conceptual tool for vocational advisors to use with young people.

Along with adequate information about different career paths it is also important that young people understand that they may encounter unexpected, unplanned and chance events that may impact on their vocational behaviour. An awareness of such occurrences makes it possible for people to respond in an open way, accepting that they can draw on their values and experiences in their response. Again, this is a matter of education - part of the role of vocational education should be to alert young people to the possibility of the unexpected while encouraging them to develop skills that enable them to respond to the unexpected rather than becoming ambivalent, overwhelmed or anxious.

When young people are led to believe that they are personally responsible for their vocational success or failure, the result can be ‘cruel optimism’ (Berlant, 2006; Rasmussen, 2013), where the focus is on the unachievable. Dreams for the future can become an obstacle to an individuals’ ability to prosper. This is a situation that several *Transitions* participants found themselves in after their initial goals were not possible. ‘Cruel optimism’ may be particularly a reality for young women, who in a neoliberal, postfeminist context are subject to expectations of agency and success and are increasingly required to be engaged with transforming the self (Baker, 2010).

Negotiating these expectations can be burdensome and result in negative mental and physical health outcomes, as seen in examples from the *Transitions Project*.

The gendered differences of the *Pathways Project* aspirations were statistically significant and suggested that girls did hear the 1980s catch cry of ‘girls can do anything’. By the time the *Transitions Project* participants were making their vocational decisions it appeared that they heard this slogan as ‘girls must do *everything*’. It appears that many young women have now eschewed feminist explanations of inequity and, instead, responded to the neoliberal context with the assumption that there is a ‘level playing field’ where individual hard work will pay off. This has left them striving for career success while still assuming they will take primary responsibility for managing the domestic lives of their family members. This suggests the need for more awareness about work/life balance along with education to both genders about how to share the management of domestic life. If boys and girls understand that caring for children and running a household is not solely women’s responsibility, the burden will not continue to fall on women. Improved childcare provisions and workplace awareness of family and other responsibilities are also crucial to the ability of both genders to manage their competing responsibilities.

Dunedin Study women working in non-traditionally gendered occupations were more likely to come from middle class families and on average were more cognitively advantaged than women working in female-dominant occupations. This suggests that it is not easy for all women to attain work in male-dominant occupations. It is also important to remember that the ‘non-female’ work that the *Dunedin Study* members did was largely professional and managerial. Despite positive action plans, few women are attracted to traditionally male work in trades (Ministry of Women's Affairs, 2008; Murray, 2004b; Vaughan, et al., 2006) and unskilled occupations (with the exception of caring occupations). Meanwhile, some professional occupations, such as surveying and engineering remain dominated by males. Education about the pre-requisites required for non-stereotypical work may ensure more women have the skills and confidence for such work. However, this places the onus on the individual and below I suggest that an overhaul of workforce relations is required to create structural change that might break down the gendered division of careers.

Although much of the focus of this thesis is on the changes in women's vocational choices, the plight of men cannot be ignored. It must be remembered that a greater proportion of *Dunedin Study* women than men worked in managerial and professional occupations and that having higher level teenage aspirations were particularly important for men's occupational outcomes. Very few men chose to work in 'non-male' jobs and those who did were usually not employed in traditionally female areas but were more likely to work in occupations that are not dominated by either gender. To encourage more workers to be attracted into fields traditionally dominated by the other gender, a reconsideration of workplace cultures and social relations is required. Adequate remuneration for all work is essential and there is a need for workers' rights, conditions and contracts to be re-instated. Particular types of work need to be re-evaluated and understood as providing value to the community. This is particularly true of caring work, which is often poorly paid and primarily done by women. Current hostile work relations, with increasing amounts of short term contract work, individual contracts and decreasing workers' rights have the most impact on those with the least power. This research showed that SES was a salient factor in occupational outcomes, particularly for women. This suggests the complex tie between the structural factors of gender, class and culture. Failure to address these issues of inequity will cause the workforce to become increasingly stratified with opportunities being open only to those who are well resourced in the dominant groups' cultural capital, thus compromising human rights and cementing inequitable social relations.

One last implication of this research is the need to highlight the diversity of vocational experience, while clarifying that there are structural constraints on the choices that young people can make. As I noted earlier in this thesis, critical theory requires researchers to expose, critique and analyse the power relations underlying a situation. Critical research also requires a transformative or action component. The dominant power structures in social reproduction need to be exposed before they can be challenged. Part of this process involves alerting people to the forces of hegemony, where their own desire is harnessed so that they become willing participants in their own subjugation (Kincheloe & McLaren, 2011). The stories of the *Transitions* participants showed that they experienced some burdens in traversing the vocational pathway but they largely bore those with little reflection on the influence of systemic, political and structural factors. Ensuring that young people are educated to understand cultural, gendered, economic and class inequity

could increase the likelihood of young people challenging these inequities for the betterment of their own and society's future.

Along with ensuring that young people, their parents and whanau are aware of the unexpected and expected challenges faced in the vocational journey, it is also important that institutions such as schools and post-secondary education providers acknowledge and adapt to the various requirements of different students. Young people from minority cultural groups and lower SES families are disadvantaged in these institutional settings and require extra support, advice and resources to succeed. Governmental policies also need to address this inequality so that all young people are adequately resourced to approach their post-secondary vocational journey. While it seems unlikely that there will ever be a return to free tertiary education, inequity can be addressed for young people without social and economic capital via improved access to scholarships and additional student assistance programmes. Young people without social capital who enter the workforce from secondary school are also poorly equipped to compete in the competitive workplace market, particularly in times of high unemployment for those under 25. Policies to support employment of young people are required rather than the current negative and restrictive policies which allow workers to be laid off after a probationary period of three months.

This project showed that most young people do not experience a straightforward vocational journey from school to a paid occupation. Given the current economic climate, it is also unlikely that many will stay in the same occupational field for their working lives. Adaptability has become a key component for success in the workplace. With these factors in mind, it is important that young people are encouraged to try different paths and that this should not be viewed as failure but as a step towards adaptability. Work experience programmes and internships are one way to develop adaptability and gain experience of different occupations is. Increasing, improving, resourcing and publicising such programmes should be a priority for the vocational education field. However, it is also important that these are supported by employers and legislature so that they do not become yet another way that young people are exploited in the workforce.

It is also important that research continues into the field of vocational behaviour, as the nature of work and employment conditions continue to evolve. Researchers need to

identify agendas and make the social context of research apparent to ensure that studies do not contribute to the reproduction of inequitable practices. This thesis shows that young people's vocational behaviour is complex and requires complex methods and methodologies to understand its influences. This may be particularly true for current and future generations who may never experience the phenomenon of a 'job for life'.

Finally, what is the answer to the question in the title of this thesis - "Do occupational aspirations matter?" Teen occupational aspirations do seem to be important in the long term. Young people who have teenage vocational occupations were more likely to find work in adult occupations that have higher remuneration and status. This is particularly the case for those who were already advantaged. To ensure all young people have equitable access to occupations from all strata of the workforce it is crucial that we redress the systemic, political and structural factors that reinforce the uneven allocation of resources to children and young people as they are growing up.

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Appendices

Appendix 1: Literature Search

1. Search terms – “young people” or teen* or adolescen* **and** career or job **and** wellbeing or well-being
Using Web of Science – got 112 hits. 17 were relevant. Largely from the psychology literature with lots of models of development.
2. Search terms – “young people” or teen* or adolescen* **and** career or job **and** wellbeing or well-being
Using Web of Science – got 112 hits. 17 were relevant. Largely from the psychology literature with lots of models of development.
3. Read Massey, EK., Gebhardt, WA & Garnefski, N. (2008) Adolescent goal content and pursuit: A review of the literature from the past 16 years. *Developmental Review* 28: 421-460. Had lots of references which were relevant – article about adolescent goal setting but lots of them were around occupational goal setting. 10 articles from a range of methodologies
4. Looked at theses in NZ – found thesis by Strathdee – good for historical context and some methodological work.
5. Read Ashby & Schoon (2010) Career success: The role of teenage career aspirations, ambition value and gender in predicting adult social status and earnings. *Journal of Vocational Behaviour* 77: 350-360. More recent than a lot of what I had been reading so had some more recent refs esp around gender diffs
6. A reference found in Ashby & Schoon (above) was from *Educational Research and Evaluation* and was included in a special issue: Understanding Women's Choice of Mathematics- and Science-Related Careers: Longitudinal studies from four countries. Five of these articles were relevant.
7. Another Ashby & Schoon reference was from the Roeper Review which had two special issues: 1991: Gender Equity Issue Continued and Meeting the Special Needs of Gifted Males. And Gender Equity: Meeting the Special Needs of Gifted Females. Three articles from here were relevant.
8. After reading Francis' 2002 article 'Is the future really female? The impact and implications of gender for 14-16 year olds' career choices' looked up the citations of the article and found several later articles including Sanders and Mumford from NZ.
9. Read Mello, ZR. (2008) Gender variation in developmental trajectories of educational and occupational expectations from adolescence to adulthood. *Developmental Psychology* 44(4): 1069-1080 who cited some other longitudinal studies so retrieved them, including Trice, which was ordered from library
10. Read Powers, RS. & Wojtkiewicz, RA. (2004) Occupational aspirations, gender and educational attainment. *Sociological Spectrum* 24(5): 601-622 which has been cited by some more recent articles which look at different variables' impact on young people's vocational choices so included these.
11. From articles that cited Powers' - read Reynolds, J., Stewart, M., McDonald, R. & Sischo, L. (2006) Have adolescents become too ambitious? High school seniors' educational and occupational plans, 1976 to 2000. *Social Problems* 53(2): 186-206 and got three articles cited by them re aspirations compared to achievements. Also an article that cites Reynolds (Alexander, 2008). Also from Powers' read Howard, KAS., Carlstrom, AH, Katz, AD., Chew, AY., Ray, GC. & Caulum, D. (2011) Career

aspirations of youth: Untangling race/ethnicity, SES and gender, *Journal of Vocational Behavior* 79: 98-109 which had 4 articles about aspirations and expectations so retrieved them.

Appendix 2: Pathways Project Questionnaire

Future Job Plans

Do you hope to get a particular job?

Yes

No

If your answer was 'no', please go to question 16

If your answer was 'yes', please answer the questions below:

What is your **first choice** for a future job?

First choice:

What is your **second choice** for a future job?

Second choice:

What chance do you think you have of getting the job, or jobs, you have chosen?

	Good Chance	Fair Chance	Poor Chance	Do not know
First choice (tick a box)				
Second choice (tick a box)				

Appendix 3: Questions asked of the Dunedin Study Members

CURRENT OR MOST RECENT JOB

Next, I'd like to ask you some more questions about your work.

If asking about a past job, use past tense for the following questions.

First, I'd like to find out about your current/most recent job; ***if homemaker, code as such.***

OCC1.

A. What is your job called? What kind of work do you do?

B. What are some of your main duties or activities?

C. What kind of business or industry is that in? (What do they make or do?)

D. Does this job require any specific qualifications or skills?

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After completion of the interview:

To code socioeconomic status, use questions OCC1A-OCC1D.

*Use six digits. The first five digits identify the occupation uniquely using
the NZ Standard of Occupations 1999 (boxes 28-32).*

(28-32)

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Appendix 4: Transitions Project Interview Schedules

Constructing Futures Questionnaire: Interview 1

1. School Questions: these are about your whole school life – some about being here and also the other schools you've been to.

a. Can you tell me about the schools you have been to?

Which was the best? What was good?

What was the worst? What didn't you like?

b. Now we'll talk about high school specifically:

Are you a boarder? [If yes]: Do you board at the boarding establishment or privately? [If at boarding hostel]: how do you find the hostel environment?

How do you get to school? (bus, drive, get driven, walk, bike etc)

How did you feel when you first started high school (eg nervous, excited, anxious, happy etc)?

How interesting do you find school now? Is school enjoyable? Why/why not?

What subjects do you take? What is your favourite subject? Least favourite? What makes these subjects especially good and bad?

How easy or difficult is school work for you? In what ways? Which subjects are easier?

Do you like your teachers? Are there some you really like? Can you tell me about them? What about those you don't like? Why don't you like them?

Are there people in the school you would go to see for support or advice? Who? What is their role at school?

Is there anyone at school you would choose to talk to about your choices about future careers and jobs?

What contact have you had with these staff at school and for what reasons? How were your experiences of dealing with these people?

Principal,

Deputy Principal,

Assistant Principal,

Deans,

School Councillor

c. Now other things at school:

What other activities are you involved in at school? (eg Stage Challenge, choir, sports, school production, school council, cultural groups, Young Enterprise, Journalist Club,

Duke of Edinburgh, Prefects Concert/ Eistedof, work experience, debating, school ball committee, library, prefects, jazz band, Shakespeare competitions, drama etc)

How do you spend your lunchtimes and intervals?

Who do you hang out with at school? (a big group of friends, close friend/s, sports team, club group, by self etc)

Are your school friends the same people that you hang around with out of school?

d. Now just a couple of other questions about school:

What are the things you hope to get out of school? What would you like to achieve at school?

Do you feel that you're getting what you want from school at the moment?

What is the best thing about school? The worst?

2. Life questions: These questions are about you and the sorts of things you like to do. We'll also talk a bit about your family and other people who might be important to you.

First of all: How old are you?

a. Some questions about your family and home life:

What is your family life like? Do you have brothers, sisters? Where are you in your family? How old are your brothers and sisters?

Who lives at your place? How long have you lived there?

What do the other people at your place do? (School, work etc?) What are their jobs?

Who do you feel especially close to in your family (including your extended family eg could be nana, uncle, cousin or mum, sister etc)?

How do you feel the adults in your household treat you? How would you like to be treated?

Are your family supportive of the decisions you make now? (eg decisions about school, work, your interests and social life)

Do you have a lot of responsibilities at home? What sorts of things? Do you get paid for these?

b. Now some questions about living in your town/area [probably Gore but could be rural area etc]

Where do you live? Do you like living there? How long have you lived here?

What are the good things? What are the bad things?

What would you like to have here to make it a better place to live?

How difficult is it to get around in Gore if you do have something you want to go to?

Do you have a driver's license? Do you have access to a vehicle?

c. Now some stuff about your interests and what you do in your spare time:

What do you like to do after school and in the weekends? School holidays?

Do you watch tv/videos/dvds? What is your favourite programme/movie?

Are you into playstation/X box/MP3s/computer games?

Do you spend much time on the computer? What are you into? (internet, chatrooms, MSN, emailing etc)

What sorts of things are you keen on? (hobbies, interests such as music, art, cars, sports, movies, dancing, computers, mechanics, making things, reading etc) Or do you just like chilling out?

Is it easy to do those things here?

Is spirituality important to you? Can you tell me more about that? Do you belong to a church or a youth group?

Are your family supportive of your interests?

How did you get into the things you are interested in?

Are there things you think you might get into as you get older?

Do you like partying and socializing? Who do you like to hang out with? Friends? Or do you like to spend time with your family?

Some kids around your age have a best friend or couple of friends. Others hang out in a group or have a range of different friends. What would you say best describes your friendships?

Or are you more of a person who enjoys their own company?

Would you say most of your friends are girls or boys? Your age? Or older or younger?

Do you have a girlfriend/boyfriend? How long have you been going out together?

d. And finally in this section some questions about work:

Do you have paid work after school, in the weekends and/or in the holidays? What do you do?

How many hours do you work? How much do you get paid? What do you usually spend your earnings on? Do you save any money?

Do you enjoy your work? How do you feel your colleagues treat you? How about your boss? Do you deal with the public? How do they treat you?

How do you manage all your commitments? (eg work, school, sport, cultural, social)

3. The future: some of these questions are looking well into the future and you might not have thought about them too much but we'll see how we go. Don't forget if you don't want to answer you don't have to.

What will happen when you finish school? What are your plans for next year?

How did you come to that decision? Who have you talked to about it? Who has been helpful?

Where have you got the information about the jobs or courses that you're interested in?

Has anyone (eg family, friends, anyone at school, workmates etc) put pressure on you to head in a certain direction (study, get a job, stay at school as long as possible etc)?

What would your family like you to do?

Will your family help you out financially when you leave school?

Are you interested in following a similar career path to anyone in your family? [If yes] Who?

Do you think it will be easy or difficult to get a job when you're ready to look for work?

What hobbies/interests/sports do you hope to continue with when you leave school? Are there new ones that you'd like to take up?

Will you do an 'OE' at some stage? When do you think that might be?

What would you like to be doing in five years time? Can you imagine what you might be doing then – for a job?

What about in 10 years? What do you hope to achieve by then? What things will you need in order to succeed?

Where would you like to live when you're older?

Can you imagine what your living situation might be like? Would you be living with family, friends, a partner, by yourself?

Would you like to have kids one day, do you think? How old would you like to be when you have a family?

4. What else: In this section we will talk a bit more about you and what makes you who you are.

Are there things that you have done in your life or that have happened to you that are really important?

Do you think that anything or anyone in particular has had a big effect on you? And it could be good or bad. Can you tell me more? Are you happy to talk about this.

If no response to above questions: try this as a prompt: Are there other things in your life that make you who you are? What sorts of things? (some people have things in their lives that are quite life changing, such as shifting town or birth of a niece or nephew

or having an accident . Or it might be something ongoing like loving sports or having a neat relationship with a friend or whatever. Just whatever you think of – you might want to take some time)

Are you happy at this stage of your life? Are you happy with the way things are?

Is this a good age to be? In what ways?

What do you think would be the ideal age?

What has been the best time of your life? Can you tell me a bit more about that time?

Is there anything else that you'd like to tell me that we haven't covered?

Constructing Futures Questionnaire: Interview 2

(Key questions in bold)

Introduction:

Tell me what you've been up to since we last talked last year.

What are you studying?

Where are you living?

How's it going?

Section 1: Current Course

[If relevant] Tell me about your course this year

Prompts:

What are your current time commitments with classes?

Do you have a heavy workload?

Are you enjoying your course work?

Does your course involve lectures as well as tutorials? Or do you have workshops/ labs etc? How do you find the teaching process?

Is it what you expected? How/how not?

Do you feel you were well-prepared for the university work?

Prompts:

How do you find the motivational aspect?

Are you able to work to deadlines etc?

Have you made plans for the future years?

Prompt: Will you continue with this course?

Section 2: Family

[If relevant] **How has it been leaving home?**

Prompts:

Have you been back home? How was it?

How much contact do you have with your family now?

Have you been homesick? If so, have you combated it and how? If not, why don't you think you were?

Do you see other family members or extended family in your new environment?

How do you think leaving school and home has impacted on your relationships with family? How do they treat you now?

Can I also just ask some questions about your family for the background stats for the project? As with everything to do with the study it is anonymous. Do you know your parents' highest educational qualification (if any)? Do you know if they own their own home? With or without a mortgage? Do you know what their income would be?

Section 3: Work and Finance

Did you work over summer?

Prompts:

What did you do?

How many hours did you work?

What was your hourly rate?

Did you manage to save any money?

Did you live at home over summer?

Did you pay board while you were there?

Are you currently in paid work?

Prompts:

What do you do?

How much do you earn?

How many hours do you do?

How did you get the job?

[If relevant] Do you have a student loan?

Are you borrowing money for living costs as well as course costs?

Have you thought much about the long term impact of having a student loan?

How do you imagine it will affect you? Are you currently paying interest on your loan?

How much are your fees?

[If relevant] Are you eligible for a student allowance?

Do you know your parents' income?

Do they own their own home? With or without a mortgage?

How much does it cost you to live each week? Rent, food, power, phone, entertainment, clothes etc

Do your parents help you out financially? How?

Section 4: Interests and Relationships

What do you do for fun here?

Prompts:

Are you playing sports/ doing the same things that you did in your spare time when you were at school?

How did you get involved in those activities?

Do you enjoy living here? What do you like about it? Not like?

How do you find getting around?

Prompts:

Do you have transport? If not, how do you get around?

[If relevant] Are you enjoying the student life?

Prompts:

How much is the clichéd heavy drinking student life a reality?

How is your social life? Do you get out much?

Have you found it easy or difficult to make friends?

Prompts:

Did many people from your home town to this city/town? Do you have anything to do with those people?

Do you keep in touch with friends from school? Is that easy to do?

Are you going out with anyone at the moment?

Prompts:

[If relevant mention partner from last interview] Are you still with the same person you were going out with last time? Are they living here too? How is that?

If so, how long have you been going out?

How different is it being in a relationship when you're living away from home?

Section 5: Ending School

How did the rest of the year go?

Did you sit exams?

a. Academic:

How was the process of preparing for exams?

Prompts:

How helpful were your teachers as the end of year approached?

Do you feel you were well prepared?

Were the systems at your school good for supporting senior students preparing for external exams?

How did your exams go?

Prompts:

Were you pleased with your results?

Did they reflect the amount of work you had done during the year?

How did your approach to school work and study change over the time you had at school?

Would you have made different choices re subjects, extra-curricular activities etc if you'd known what you know now?

[If didn't sit exams] How did the year finish up for you in terms of schoolwork?

Prompts:

Did you complete NCEA? Or other qualifications?

Were you pleased with the qualifications that you left school with? In what ways?

b. Extra-curricular

[From last interview, if relevant]

Did your other commitments at school (prefect, sporting, cultural etc) continue through to the end of the year?

Prompts:

Or did your responsibilities change?

Was it hard to maintain enthusiasm for those extra-curricular activities as the year went on and the academic pressures picked up?

Are there things you wish you had done at school that you didn't do?

Were things that your school could have offered but didn't that you would have liked to have done?

c. Support at school

[If relevant from earlier interview]

We talked about support people at school in the earlier interview. Did you continue to make use of the same support systems as the year went on?

Prompts:

Which other staff members for support and/or advice as the year went on?

What careers advice did you obtain (if any) from within school later in the year?

How did you feel when school actually finished?

Do you think that the support you got at your school prepared you for university/study/work?

[If relevant] What about being a boarder?

What about a life outside school? In what ways?

Section 6: Self and the Future

Are you happy now?

Prompts:

How does your life now compare to life last year?

How are things different for you now?

Describe a typical day for you.

Prompts:

Are you busy now and if so how do you manage different commitments?

Now that you've left school do you feel 'grown up'? What do you think that term involves?

What are the most important things in your life at the moment?

Can you imagine what you might be doing in 5 years time?

How about ten years?

What do you think your living situation might be?

Where might you like to live?

What things will you need to succeed? What does success mean to you?

Anything else you want to talk about??

Appendix 5: Decisions on NZSCO classifications for Pathways

Decisions about coding for Pathways

- If they have given more than one job for first choice (eg artist, designer) I have coded the first one
- If they give a specific job with other info around it eg ‘working with children, such as teaching’ I’ve coded the specific job
- Primary teachers, ‘teacher’ (no more information) and any specialist teachers coded as primary school teacher
- Advertising/advertiser marketer I gave the code for advertising accounts executive
- All the armed forces get the same code (51551) unless they do a job that is also in the civilian world. So, I put the airforce pilots with the pilots and the ‘truck driver in the army’ with the truck drivers.
- I coded ‘banker’ as bank manager and ‘to work in a bank’ as bank teller
- Carpenters and any variation of (including apprenticeship) I coded as builder
- Coded the ‘just hope to get a job, joyner’ as a joiner
- Coded ‘to get a trade – chef’ as a chef
- Coded ‘cateerer’ as catering manager
- Coded the ‘chemist or biochemist’ as a chemist rather than a pharmacist which is how I coded the other chemist/pharmacists (book differentiates between these).
- Coded the ‘research pharmacist’ as a biochemist because of the ‘research’ part.
- Included the ‘computer graphist’ with the graphic designers
- All the other computer people (apart from those who state programmer) I coded as computer technicians (something in the computer field etc) apart from one who said computer operator (coded as computer operator)
- Coded ‘electronics design and builder’ as ‘electronic engineering technician’
- Coded the engineers (non specific) and the ‘commercial engineer’ as ‘other mechanical engineer’
- Coded TV and film production and TV camera technician as ‘camera technician’
- Coded the ‘engineer at NASA’ as an aerospace engineer
- Coded ‘learning a trade and farming’ as a farmer
- Coded the WA fire brigade as a fire fighter
- Coded ‘fishing boat’s’ as fisher
- Coded the ‘forestry or geography studies of some kind’ as forest/park ranger because it sounded like this person was more into the academic side of forestry rather than the labourer
- Coded anything to do with horses as the stablehand, horse trainer code
- Coded TV journalist with the journalists, ‘TV and film production’ as television producer and the other TV/media jobs as television announcer because it appears that they want to be in front of the camera (I’m speculating)
- Kindergarten and pre-school teacher coded as kindergarten teachers and recorded on charts as ECE teacher.
- Nanny and childcare worker coded as ‘nanny’ (before the days when all ECE teachers required same training so nanny would have had less status)
- ‘To become a nanny or kindergarten teacher’ I coded as nanny since it was first
- I coded the ‘anything to do with children as nannies’

- Coded ‘Law/accountancy (Double degree)’ as lawyer. Also all the variations on lawyer – barrister, solicitor, children’s lawyer, criminal lawyer etc – have same code in book
- Coded ‘something to do with cars’ and ‘to work in a garage’ as mechanic
- ‘Working in an old people’s home’ was coded as ‘nurse’s aide’
- ‘Nurse or staeroeropist’ and ‘nurse, hairdresser (both same)’ I coded as nurses as was the nursing of older people (geriatric nursing) which has general nurse code. Plunket nurse gets a different code
- All the pop singer/musician type jobs I coded as singer
- Retailer, shop keeper, supermarket manager, Computer/Electronics shop owner, and ‘open a sports shop of my own’ I coded as retail managers and shop assistant and working in shop as retail assistants.
- Pilots in the airforce are coded as pilots
- Coded ‘Science /medicine researcher’ ‘career in sciences’ and ‘some form of scientist’ as medical research officer (life science technician). Coded the science technician as physical science technician.
- Coded secretary at a good business, secretary/receptionist, secretary, type of secretary/Receptionist and accounting secretary all as secretaries (along with everyone else who said secretary – included some who spelt it wrong and one person who said ‘secretarial work’)
- Coded anyone who said clerical work, office work or job as a general clerk
- Typists and shorthand typists coded as typists/word processor operators. Also people who said office work with typing or mentioned typing/computer work
- Coded ‘something to do with art’ and ‘something in art’ as artists
- Coded ‘something in the fashion world’ as fashion designer
- Coded all art designers and interior designers as ‘industrial designer’
- Made the arbitrary decision to code people who said ‘teacher’ as primary school teachers and coded the person who said ‘work in a shop to raise money for teachers college’ the same way
- All subject teachers (PE, English etc) coded as secondary school teachers
- Coded the ‘teach mental kids’ as a special needs teacher (included with primary, generic and special).
- Coded the ‘English teacher in a foreign country’ as a secondary school teacher
- Coded ‘telecommunications’ as a telecommunications technician
- Traffic officers are coded as police officers
- Coded all the horse people as horse trainer, groom or stable hand
- Coded XXX Hospital Board (Crain driver) as Crane operator
- Coded ‘any job, drive around pick up some things for people’ as a courier
- Coded anything that mentioned ‘working with animals’ or SPCA type things as ‘animal welfare worker’

NB: 14 boys couldn’t be coded and 18 girls – this included people who said specific workplaces (HXXX, MXX, NXX Ltd), jobs that couldn’t be deciphered (Phscology, Comusens) and people who gave general answers like wanting to own a business or a job where they can travel. I also was unable to code cases where people said organisations but didn’t say what they would do there (Lands and Surveys, leathering tannery). I excluded the person who said ‘priest’ because it was obviously a joke from reading the rest of her form. I couldn’t code ‘astronaut’ because it doesn’t get a coding in NZ

Appendix 6: Limitations in the NZSCO coding system

There are some limitations in working with the NZSCO. This data was collected in 1986, well before many of the occupations described in the coding manual were invented. However, the NZSCO does retain careers in the coding manual as long as they exist and update terminology and labels for careers as they change. This meant that it was possible to compare teen aspirations and adult occupations using the same system but with the understanding that the work that the teenagers imagined that they might be doing, may well have changed in the intervening years. Rapid technological and workplace change by the time the Study members were in their thirties also meant that, despite the codes' reviews in 1990 and 1995, the classification system is always behind the actual employment marketplace. This means that some Study members' adult jobs were 'newer' than the codes allowed for.

The codes are based on the 1988 International Standard Classification of Occupations but modified to New Zealand conditions. This meant that for some actual adult occupations (for people who did not live in New Zealand) and one teenager's hoped future career (astronaut) no codes were available because those jobs are not available in New Zealand. However, it does allow for jobs specific to the New Zealand context to be coded (such as a Kaiako in a Kohanga Reo, which interestingly has a different code from all other ECE teachers).

The NZSCO coding system did provide some challenges in the seemingly arbitrary nature of some classifications. Some seemingly disparate occupations were included in the same category while other rather similar ones were different. For example, police officers, hairdressers, chefs, fashion models and salespeople are all included in the group of Service and Sales Workers while physiotherapists and opticians are in the Technicians and Associate Professionals group but pharmacists and nutritionists are in the Professionals group. Another example of unusual grouping is the inclusion of all careers in the armed forces within one code. These may well be historical (particular careers have changed in terms of training and skills across time) but is definitely something to keep in mind when comparing occupations by category (as seen later in this chapter). The alphabetical index lists all occupations alphabetically but some common terms for particular work are absent (for example, personal trainer, pharmacist), which makes it difficult to find the code.

Another issue with this coding system is that it does not categorise unpaid work into separate categories but considers them all as 'outside the scope' of coding or 'unidentifiable'. This does make it difficult to differentiate between people who are unemployed, in prison, doing very unusual jobs and doing different types of unpaid work. It is also interesting that these 'uncodables' are included under category 9, which contains the elementary occupations. This implies a certain lack of worth for those workers whose occupations are grouped in the 'uncodable' category. It seems that the 'higher' status occupations are differentiated significantly more. There are numerous different types of manager, which seem to differ only slightly in their tasks and training while labouring jobs which are vastly different are within the same unit group. For example, a drain-layer and a building exterior cleaner are within the same unit group. This seems to indicate a hierarchy of value where jobs which require an academic education have more attention devoted to their codes than those which require a different type of (less academic) skill.

Despite these limitations in using classifying the aspired to careers of these teenagers, it did provide a system which worked for coding *most* of the occupations that the young people

aspired to and *many* of the adult occupations so it was a pragmatic way to make sense of a large amount of data and compare the two data sets. Below I present the teenagers' career aspirations, firstly by reflecting on the most popular work preferences and then differentiated by gender.

Appendix 7: Decisions re Gendered Occupations for Pathways

Gendered Jobs:

Pringle's list:

1979 Male Jobs	1979 Female Jobs
Politician	Café operator
Architect	Dietician
Surveyor	Primary School teacher
Doctor	Kindergarten teacher
Dentist	Speech therapist
Veterinarian	Librarian
Accountant	Radiographer
Lawyer	Medical lab assistant
Draughting technician	Dental nurse
Pilot	Physiotherapist
Journalist	Occupational Therapist
Chef	Veterinary assistant
Fire fighter	Office clerk
Police officer	Cashier
Armed forces	Receptionist
Forestry worker	Telephone switch operator
Carpenter	Air hostess
Plumber	Waitress
Painter/decorator	Nurse aide
Mechanic	Hair stylist
Butcher	Shop assistant
Welder	Florist
Truck driver	Fashion model
Warehouse packer	Sewing machinist
Road worker	Launderer
Manager	Housewife/mother
Scientist	Nurse
Engineer	Computer operator
Farmer	Typist/secretary
Wood product assembler	Housekeeper

Notes on decisions re inclusion into 'gendered jobs'

- Used Pringle's 1979 codes where 60 item occupational checklist was developed based on 1971 NZ census data. Of the 60 occupations included, 30 were selected because they met the criterion of being 'female-dominated', having at least twice as many female as male incumbents (eg nurse) and 30 were selected because they were 'male dominated', having at least twice as many male compared to female incumbents (eg butcher). The selection ranged across all occupational categories – professionals, labourers, service workers, trades etc. Important to note – Pringle's categories included housewife/mother in 1979 and 1995. This wasn't an option for *Pathways* girls.

- All the *Pathways* desired jobs were coded using the 1999 NZ Standard Classification of Occupations and were grouped according to their codes and then put into each of Pringle's two categories. Some jobs were more specific than Pringle's occupations so higher (less specific) three level NZSCO level codes were used for the occupations of scientist, engineer and manager and the four level NZSCO level codes were used for the occupations of nurse, typist and housekeeper. This encompassed all of the jobs which could match Pringle's description. For one of Pringle's jobs, computer operator, there were 2 NZSCO codes that related (data entry operator and computer operator).
- There were 159 people who aspired to 53 different jobs that were not included on Pringle's list. Their gender dominance was decided by using Stats NZ data from the 1986 census and were defined as 'male' or 'female' by referring to the formula which derives a level of female or male 'domination' of occupations as described by Else (2003). To be considered 'female dominated' an occupation requires at least 70% women employed in it. Because of the different numbers of men and women in the workforce, to be considered 'male', an occupation requires at least 80% of its workers to be men.
- This process was not straight forward. The occupational codes used by StatsNZ in 1986 were different from the NZSCO (1999) codes used to code the *Pathways* and *Dunedin Study* members' occupations. Occupations recorded in the 1986 census were coded from NZSCO68. A code comparison chart was available but did not include all occupations. However for the majority of these cases I was able to search the 1986 database by job title. The only occupations which were not able to be found this way are detailed here, with the occupation title used instead of what was being searched for: fashion designer (used clothing designer), nanny (used 'other pre-primary education teachers'), security guard (used security officer), courier (used lorry and van driver) and scuba or deepsea diver (used Other Fishermen, Hunters and Related Workers)
- The different coding systems meant that several different occupations were combined between 1981 and 1999, which sometimes allowed for more searches on more specific occupations than available under NZSCO (1999) codes. Some people have described a job which was interpreted for NZSCO 1999 codes that fit better under earlier codes where coding is more specific eg Groom or stablehand have the same code as a horse trainer in 1999 but were different in codes from NZSCO1968. In these cases, the gender allocation of the occupation was determined by the numbers of people doing the precise occupation as recorded in 1981. This includes Animal Welfare Worker was particularly difficult to work out – encompasses several different intended occupations (pet groomer, SPCA worker, zookeeper as described by the *Pathways* participants) in NZSCO, 1999 but was separated into seven different occupational codes in the 1968 system. I used "Other agricultural and animal husbandry not elsewhere classified" for all the people who wanted to work with animals and the pet groomer but coded the intended zoo keeper separately and then combined their scores (Animal workers were 77%F, zookeepers 60%M, and combined 69%F so neutral).

- In the case of horticultural workers, there was a differentiation in NZSCO99 between market gardeners and other horticultural workers. This was further broken down in NZSCO68 to include 10 different groups (nurseryman, nursery worker, market gardener, market garden worker, tomato grower, other horticultural worker etc etc). I worked out the numbers for market gardeners and market garden workers separately for the person who wanted to be a market gardener and then for the people who wanted to work in horticulture and in a nursery I worked out the numbers from nursery workers, other horticultural farmers and nurserymen. They have different codes under the 1999 codes. Both were gender neutral.
- When people described a job which is divided into several different jobs under 1968 codes, I tried to get the specific job which appeared to be what they wanted to do and if it was marked different re gender, I erred on the side of coding as neutral.
- People who wanted to work with computers were tricky because they were often vague in what they described (eg “in the computer line) and there are five different computer jobs with NZSCO86 – programmer (71%M), computer system consultant (71%M), technician (85%M), engineer (91%M), operator (82% F), electronic computer fitter (98%M). So, unless they specifically said that they wanted to be a programmer or an operator I coded them as M since all other computer jobs are male dominant. Computer operator was on Pringle’s list as female.
- The food decorator was coded as “Other bakers, pastrycooks and confectionery makers”, which turned out to be 64% F

Below is the table of different occupations described by *Pathways* participants that were not on Pringle’s list with their gender dominance allocation and the percentage of each occupation that was male or female from 1986 census.

Job choice from Pathways	NZSCO Code	Male/Female/Neutral	1986 % Male/Female workers
Pharmacist	22242	N	66% M
Secondary School teacher	23211	N	50%
Archeologist	24421	N	57% M
Translator	24431	N	66%F
Telecommunications technician	31141	M	95% M
Computer programmer	31211	N	71% M
Computer operator	31212	F	82%F
Computer technician	31213	M	85%M
Photographer	31311	N	73% M
TV & Film cameraman	31312	M	80% M
Sharebroker	33111	M	81% M
Travel agent	33141	N	68%F
Social worker	33411	F	75%F

Writer	33611	N	51%M
Artist	33621	N	62%M
Graphic designer	33631	N	58%M
Fashion designer	33632	F	85%F
Industrial designer	33634	N	74%M
Interior design	33636	N	59%F
Singer	33643	N	51%M
Dance instructor	33652	F	92%F
Actor	33661	N	62%M
TV presenter	33671	N	79%M
Professional athlete	33691	M	92%M
Sports coach	33692	N	58%F
Bank teller	42121	F	89%F
Orderly in a hospital	51311	M	89%M
Nanny	51421	F	98%F
Security guard	51542	M	93%M
Model	52311	F	95%F
Market gardener	61112	N	63%M
Horticultural worker	61131	N	63%M
Landscape gardener	61132	M	86%M
Horse groomer	61265	N(combined with below)	52%F
Horse trainer	61265	N	77%M
Fisherman	61411	M	96%M
Deer culler	61431	M	95%M
Animal worker	61441	N(combined with below)	69%F
Zookeeper	61441	N	69%F
Bricklayer	71111	M	99%M
Car painter	71242	M	97%M
Signwriter	71243	M	97%M
Electrician	71311	M	99%M
Auto Electrician	71312	M	99%M
Panelbeater	72125	M	99%M
Tool maker	72222	M	99%M
Fitter & turner	72231	M	99%M
Food decorator	74121	N	64%F
Cabinet maker	74211	M	99%M
Tyre retreader	82313	M	99%M
Cheese factory worker	82721	M	91%M
Crane driver	83331	M	99%M
Deep sea diver	84121	M	90%M

Appendix 8: Pathways Gendered Occupations

Occupation	NZSCO Code	Number of Girls wanting this job	Number of Boys wanting this job	Total	Gendered (0=Neutral, 1=F, 2=M)
Politician	11111	1	0	1	2
Forest ranger	12215	1	2	3	2
Banker	12222	0	1	1	2
Advertising	12251	0	3	3	2
Retail manager	12263	1	4	5	2
Hotel manager	12264	0	1	1	2
Caterer	12267	1	0	1	2
Astronomer	21111	1	0	1	2
Chemistry scientist	21131	1	2	3	2
Architect	21411	7	19	26	2
Electrical engineer	21431	0	3	3	2
Engineer at NASA	21453	0	1	1	2
Engineer	21455	0	7	7	2
Marine biologist	22111	1	0	1	2
Zoologist	22113	0	4	4	2
Research pharmacy	22121	1	0	1	2
Microbiologist	22122	1	0	1	2
Doctor	22212	7	6	13	2
Dentist	22221	1	3	4	2
Veterinarian	22231	16	5	21	2
Accountant	24111	11	26	37	2
Lawyer/judge	24211	14	19	33	2
Scientist (generic)	32111	1	2	2	3
Surveyor	31121	0	2	2	2
Telecommunications technician	31141	1	1	2	2
Electronics Technician	31143	0	1	1	2
Draughtsperson	31181	1	3	4	2
Computer technician	31213	0	4	4	2
TV camera operator	31312	0	2	2	2
Pilot	31431	3	25	28	2
Stokebroker	33111	0	3	3	3
Journalist	33612	5	1	6	2
Professional athlete	33691	0	7	7	2
Sports coach	33692	0	1	1	2
Chef	51221	5	18	23	2
Hospital orderly	51311	0	1	1	2
Firefighter	51511	1	1	2	2
Detective	51521	0	1	1	2

Police officer	51522	5	12	17	2
Security guard	51542	0	1	1	2
Armed forces	51551	6	20	26	2
Landscape designer	61132	1	0	1	2
Poultry farmer	61231	0	1	1	2
Farmer	61251	1	6	7	2
Forestry worker	61312	0	3	3	2
Fisher	61411	0	4	4	2
Deer culler	61431	0	1	1	2
Bricklayer	71111	0	1	1	2
Builder	71121	0	9	9	2
Plumber	71231	0	1	1	2
Car painter	71242	0	2	2	2
Signwriter	71243	1	2	3	2
Electrician	71311	0	5	5	2
Auto Electrician	71312	0	2	2	2
Panelbeater	72125	0	3	3	2
Tool maker	72222	1	0	1	2
Fitter & turner	72231	0	1	1	2
Diesel mechanic	72311	0	1	1	2
Mechanic	72312	1	9	10	2
Cabinet maker	74211	1	1	2	2
Tyre retreader	82313	0	1	1	2
Dairy factory worker	82721	1	0	1	2
Truck driver	83231	5	5	10	2
Crane driver	83331	0	1	1	2
Deep sea diver	84121	1	1	2	2
Courier	91211	0	1	1	2
Nurse	22312	15	1	16	1
Plunket nurse	22314	1	0	1	1
Teacher (primary, generic, specialist)	23311	30	2	32	1
Kindergarten teacher	23321	18	0	18	1
Speech Therapist	23412	1	0	1	1
Science Technician	31111	1	0	1	1
Physiotherapy	32231	2	2	4	1
Social worker	33411	3	0	3	1
Fashion designer	33632	3	0	3	1
Dance instructor	33652	1	0	1	1
Typist/computer operator	41111	5	1	6	1
Secretary	41141	15	0	15	1
Clerk	41443	12	1	13	1
Bank teller	42121	1	2	3	1
Air hostess	51111	6	0	6	1
Waitress	51233	1	0	1	1

Nurse aide	51314	1	0	1	1
Hairdresser	51411	22	0	22	1
Nanny	51421	9	0	9	1
Retail assistant	52111	2	0	2	1
Model	52311	2	0	2	1
Pharmacist	22242	1	1	2	0
Secondary school teacher	23211	8	5	13	0
Archeologist	24421	2	2	4	0
Translator	24431	1	0	1	0
Computer programmer	31211	1	2	3	0
Photographer	31311	2	1	3	0
Travel agent	33141	6	0	6	0
Writer	33611	2	0	2	0
Artist	33621	4	0	4	0
Graphic designer	33631	2	1	3	0
Designer	33634	4	2	6	0
Interior Designer	33636	2	0	2	0
Musician	33643	2	4	6	0
Actor	33661	3	1	4	0
TV presenter	33671	0	4	4	0
Market gardener	61112	1	1	2	0
Horticulture worker	61131	0	1	1	0
Horse worker	61265	5	1	6	0
Zoo keeper	61441	9	1	11	0
Food decorator	74121	1	0	1	0
		313	309	622	

Appendix 9: Explanation of Derivation of Adult Gendered Jobs

To classify the adult jobs I used the age 32 NZSCO classifications and the age 26 classifications for those who were not in paid work at 32 (52 people – was able to classify 36 of these – 14 were not working at either age and two had illegal jobs which can't be classified with NZSCO).

Firstly I went through the adult jobs using the NZSCO coded adult occupations and comparing them to the list below (which shows all the teen gendered occupations) to get all the adult occupations which were the same as the teen gendered occupations. Although gender domination of many careers has changed between the collection of the two datasets I made the decision to code the adult careers with the same format as the teen occupations. This was for comparison reasons but also because the cohort made the decisions about the careers that they chose back in the 1980s, when the gendered make-up of occupations was more traditional. I adhered to the gender allocations for all Pringle's male and female dominated careers except housewife, which wasn't an option for the *Pathways* teens so I hadn't used it with the *Pathways* analysis and I had minimised the number of people in unpaid work by including age 26 jobs (because the focus is on paid work). Also, we don't actually know what the nature of the adult unpaid work is (at least two of the people not working at either age had special needs). I also replicated all the gendered allocations that I made for the *Pathways* desired careers. This was done using the formula which derives a level of female or male 'domination' of occupations Else et al (2003 #346). To be considered 'female dominated' an occupation requires at least 70% women employed in it. Because of the different numbers of men and women in the workforce, to be considered 'male', an occupation requires at least 80% of its workers to be men. Occupational information obtained from the 1986 census (the year the *Pathways* data were collected) gave the numbers of men and women working in each occupation, enabling a classification of male or female dominated or neither.

There are a couple of quirks with the gender coding this way – all managers are traditionally male with the Pringle system but a café operator is a female occupation. A café operator is coded as a café manager using the NZSCO system so technically is both male (manager) and female (on Pringle's list as café operator). I have included it as female.

Male jobs	Female Jobs	Gender Neutral
Accountant	Teacher (primary, generic, specialist)	Secondary school teacher
Pilot	Physiotherapy	Musician
Armed forces	Bank teller	TV presenter
Lawyer/judge	Nurse	Designer
Architect	Clerk	Archeologist
Chef	Typist/computer operator	Computer programmer
Police officer	Hairdresser	Zoo keeper
Mechanic	Kindergarten teacher	Horse worker
Builder	Secretary	Actor
Engineer	Nanny	Photographer
Professional athlete	Air hostess	Graphic designer
Doctor	Social worker	Pharmacist

Farmer	Fashion designer	Market gardener
Veterinarian	Retail assistant	Horticulture worker
Truck driver	Model	Travel agent
Electrician	Plunket nurse	Artist
Retail manager	Speech Therapist	Writer
Zoologist	Science Technician	Interior Designer
Computer technician	Dance instructor	Translator
Fisher	Waitress	Food decorator
Dentist	Nurse aide	
Draughtsperson		
Stockbroker		
Advertising		
Electrical engineer		
Forestry worker		
Panelbeater		
Forest ranger		
Chemistry scientist		
Signwriter		
Scientist (generic)		
Surveyor		
TV camera operator		
Car painter		
Auto Electrician		
Journalist		
Telecommunications technician		
Firefighter		
Cabinet maker		
Deep sea diver		
Banker		
Hotel manager		
Engineer at NASA		
Electronics Technician		
Sports coach		
Hospital orderly		
Detective		
Security guard		
Poultry farmer		
Deer culler		
Bricklayer		
Plumber		
Fitter & turner		
Diesel mechanic		
Tyre retreader		
Crane driver		

Courier		
Politician		
Caterer		
Astronomer		
Marine biologist		
Research pharmacy		
Microbiologist		
Landscape designer		
Tool maker		
Dairy factory worker		

Using these gender allocations (which are limited by the Pringle list and what the *Pathways* participants wanted to do for careers) there was a total of 186 jobs that could be coded. There were 107 gendered positions were either from Pringle's list (including occupations not chosen by *Pathways* participants such as dietician, radiographer, librarian, vet assistant, call centre operators sewing machinist, housekeeper and launderer, painter/decorator, butcher, welder, warehouse packer, road worker and wood product assembler). Anyone doing these jobs was coded as traditionally male or female since they were on Pringle's list. There were also the jobs that *Pathways* participants hoped to do that were not on Pringle's list, which had gendered allocations from referring to the StatsNZ 1986 census data (80% male to be male dominant and 70% female to be female dominant). Additionally some of the 186 adult jobs were jobs which were combined in *Pathways* codes were separate in the adult jobs (or they were very similar so were allocated same gendered code). For example, the occupation from Pringle's list 'manager' is an entire category for NZSCO made up of thirty five different managerial positions. One type of manager was difficult because it fell within both male and female within Pringle's list: all managers are traditionally male with the Pringle system but a café operator is a female occupation. A café operator is coded as a café manager using the NZSCO system so technically is both male and female. I included it as female because traditionally it would have been a female occupation. Other examples were nurses, who may be psychiatric nurses or registered nurses (different NZSCO codes) and I included other drivers (crane, forklift, farm machinery) with truck drivers (male), catering counter assistants the same as shop assistants (f) and the embroiderer and knitting machinist as female (like sewing machinist). I also gave any technician for an occupation the same gender coding as the main job (surveyor's technician, mechanical engineering technician, draughting technician, computer support technician – all M). So, any jobs that were on Pringle's list or had been desired by *Pathways* participants were gender allocated for the adult occupations.

This gave 672 people doing 186 jobs that were able to be assigned as male-dominant, female-dominant or neither. This left a further 190 people doing 70 jobs that required coding. These jobs were compared to the 1986 census numbers to designate them as male or female dominant or neither. This process had the same issue as the comparison of *Pathways* jobs and census numbers because the *Dunedin Study* members' adult jobs were coded with NZSCO 1999 codes and the 1986 census data was coded with NZSCO 1986 codes (see Appendix 5 for details). Some interpretation was required to compare occupations. If the job title was not exactly the same with NZSCO 1999 and 1968 codes, the terms I found to be most similar (and any clarification) are in the following list:

NZSCO1999	NZSCO1986
University lecturer (includes tutors etc)	Combined lecturer, professor, tutor and

	other higher education teachers
Technical representative	Technical salespersons & service advisors
Screen printer	Printer & compositor
Printing machinist/supervisor (at newspaper)	Offset pressman
Darkroom operator	Photographic Dark-room Workers
Tanner	Combined Tanner, Currier and Dyer & Other Tanners and Fellmongers
Deckhand	Ships' Deck Ratings, Barge Crews and Boatmen
Aluminium joiner	Aluminium worker
Pest control worker	Inspector, Weeds, Pests Etc.
Teachers Aide	Other Primary Education Teachers
Property Developer	No equivalent – used Other Managers NEC
Massage therapist	Masseur/Masseuse
Education advisor	School inspector & Health Inspector and/or Education Officer
HR officer	Personnel officer, staff training officer and vocational guidance officer
Public Relations officer	Publicity and Public Relations Officer
Social Scientist	Research Officer (Social Sciences)
Policy analyst	Operations Research Analyst
Health associate professional (includes audiologists, acupuncturists, homeopaths)	Other Medical, Dental, Veterinary NEC
Real estate agent	Estate and Land Agent
Sales rep	Commercial Traveller and/or Sales Representative
Retail buyer	Wholesale and/or Retail Buyer
Administration officer	Chief Clerk and/or Administration Officer
Organisation & methods analyst	Operations Research Analyst
Conference organiser	Secretary-Organiser
Artistic director	Director (Film and/or Television), stage director & other actors/actresses and directors
Survey interviewer	Statistical clerk & coding clerk
Postal deliverer	Post and Telegram Deliverer
Gaming dealer	No equivalent – used T.A.B. Agent
Recreation guide	Tour & travel guide, national park ranger and other guides
Meat processing worker	Freezing worker (general) and other butchers and meat preparers
Fish processing worker	No equivalent – used factory labourer (general)
Distillery worker	Other Brewers, Wine and Beverage Makers
Metal goods supervisor	Production Supervisor (Metal and Machinery)

With these extra jobs coded with 1986 census data, there were 7 more female-dominant occupations, 27 male-dominant and 36 new gender neutral jobs. The table of the occupations and the percentage of the dominant gender is below.

Code	Job	Status	%
33422	Teachers aide	F	82%F
41223	Survey interviewer	F	71%F
51235	Kitchenhand	F	83%F
51413	Massage therapist	F	81%F
52112	Demonstrator	F	94%F
82922	Electric equipment assembler	F	71%F
91111	Cleaner	F	80%F
23511	Education advisor	M	81%M
31421	Ship's officer	M	99%M
31511	Safety inspector	M	95%M
33121	Insurance rep	M	87%M
33132	Property developer	M	85%M
33152	Technical representative	M	86%M
33191	Stock & station agent	M	99%M
61133	Greenkeeper	M	94%M
71221	Glazier	M	98%M
73316	Screen printer	M	83%M
73317	Printing machinist/supervisor	M	92%M
74331	Carpet layer	M	97%M
82511	Paper products machine operator	M	91%M
82717	Meat processing worker	M	90%M
82931	Metal goods supervisor	M	97%M
83211	Taxi driver	M	84%M
83411	Deckhand	M	97%M
84112	Boat hand	M	97%M
84115	Rigger & cable splicer	M	100%M
84116	Steel erector	M	98%M
84117	Roofer	M	99%M
84118	Aluminium joiner	M	93%M
91113	Pest control worker	M	97%M
91312	Street cleaner	M	93%M
91412	Loader & checker	M	98%M
91413	Railway shunter	M	99%M
91514	General labourer	M	91%M
23111	University lecturer	N	61%M
24121	HR officer	N	56%M
24122	Training & development officer	N	62%M
24131	Market research analyst	N	55%M

24132	Public relations officer	N	52%F
24421	Social scientist	N	64%F
24422	Policy analyst	N	78%M
24441	Psychologist	N	50%
32261	Health associate professional	N	63%F
33131	Real estate agent	N	71%M
33153	Sales representative	N	74%M
33161	Retail buyer	N	59%M
33211	Administration officer	N	53%F
33212	Conference/function organiser	N	61%M
33241	Organisation & methods analyst	N	78%M
33662	Artistic director	N	77%M
33681	Clown, magician etc	N	66%M
41311	Stock clerk/store person	N	62%M
41312	Dispatch clerk	N	78%M
41321	Production clerk	N	75%M
41423	Postal deliverer	N	69%F
42131	Gaming dealer	N	64%F
51121	Tour guide	N	53%M
51122	Recreation guide	N	63%M
51231	Bartender	N	58%F
52113	Service station attendant	N	70%M
52211	Street vendor	N	55%F
74121	Baker	N	75%M
82231	Darkroom operator	N	67%F
82322	Plastics machine operator	N	77%M
82512	Cardboard maker	N	63%M
82718	Fish processing worker	N	66%M
82762	Confectionary maker	N	52%F
82792	Distillery worker	N	77%M
82812	Tanner	N	75%M
82921	Coil winder	N	73%M