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**A Study of the Career Pathways of Canadian
Young Adults During the Decade After Secondary
School Graduation**

A thesis presented in fulfilment of the requirements for the degree of

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Abstract

This study examined the career pathways taken by 47 young adults in Canada after they graduated from secondary school. Based on a grounded theory analysis, this thesis explored the way young adults made career decisions and how their resources (individual, family, social and environmental) and the messages that they heard from significant others influenced their career pathways.

The majority of the young people in this study either did not know what they wanted to do when they graduated from secondary school or subsequently changed their minds. Most engaged in a process of identity exploration through experimentation with tertiary programmes and different types of work as they tried to ascertain what constituted satisfying work. As participants experimented with different career pathways, they obtained a better sense of who they were and what types of work they found satisfying. Findings indicated that participants engaged in a process of finding a career-related place, an activity that superficially involved selecting a career pathway but more substantively meant a search for identity and life purpose. Finding a career-related place was achieved through the interchangeable use of five strategies: navigating, exploring, drifting, settling, and committing. These strategies emerged as a host of internal and external factors impinged on a young person's simultaneous search for a career and the identity that could potentially come with it.

This contingent nature of finding a career-related place stood in sharp contrast to the discourse of what is referred to in this thesis as the "career myth". This discourse related to the belief that young people should follow a linear, predictable route from secondary school to tertiary training, and then on to a permanent, full-time job. Based on these findings, an argument is made that developmental and chaos-oriented approaches to career development should be moved into the foreground when professionals assist young people in the immediate years after secondary school graduation. Accordingly, the trait and factor ethos, which continues to dominate the career counselling field, should be deemphasised. Six career design principles are identified that provide guidelines for how young people can engage in the process of finding a career-related place in a way that is

proactive while at the same time accepting that career pathways and the identities that follow may be uncertain.

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Chapter One

“Would you tell me, please, which way I ought to go from here?” asked Alice.

“That depends a good deal on where you want to get to,” said the Cat.

(Carroll, 1992, p. 83)

Introduction

This quote from Lewis Carroll’s classic story *Alice in Wonderland* characterises well the challenge faced by young people in western countries as they negotiate the school-to-work transition. Like Alice, many young people (and those around them) experience a similar crisis of direction. They want to know with certainty the educational and occupational pathways they should follow after graduating from secondary school. The Cat’s enigmatic answer hints at the paradox these young people face: they are being asked to answer a question that most are not developmentally prepared to answer. It is well established that identity exploration occurs in the context of seeking a career (Arnett, 2004; Super, 1957; Vaughan & Roberts, 2007). Following a particular career pathway helps young people explore their interests, values, and skills. The resulting identity development may clarify for them that their career pathway is no longer or never was suitable. While the Cat’s answer to Alice’s question was insightful in many ways, it lacked a sense of context. While it may have been helpful for Alice to have known where she wanted to go, there were many internal and external factors that could have completely changed any career-related plans that she made (Brown & Lent, 1996; Lent, Brown, & Hackett, 2000; Patton & McMahon, 1999, 2006).

Alice is not alone in wanting an answer to her question considering what direction to head. From the time many young people are born until the day they graduate from secondary school, their educational path forward is relatively clear. Exceptions to this linearity may occur as a result of marginalisation (for example, class differences, bullying, sexism, and family responsibilities). However, most children in western countries are expected to start in kindergarten and proceed systematically from one grade to another. Children and young people are perceived as accomplishing the same tasks at the same time. Career decisions are something for the distant future. When they graduate from secondary

school, there is no longer a clearly defined path to follow. For many, tertiary education is the next step. However, attending tertiary education does not necessarily answer the question about in what direction they should head. Many graduates of tertiary institutions face a chasm between completing education and finding a suitable place in the labour market.

I experienced this same chasm upon graduating with a Bachelor of Arts degree in Canadian Studies. Like many young people today, I graduated from university with no idea of how to translate my interests and skills into a satisfying career pathway. My own school-to-work transition was a long and painful one, a lengthy period of trial and error that eventually saw me complete a Bachelor of Education with a specialisation in outdoor and experience-based education and then, a few years later, a Masters of Social Work. After much emotional turmoil, I eventually found suitable work, first in adult education, and then later as a career counsellor working with young adults and their parents.

As with many of my colleagues, I began my practice as a career counsellor believing that it was my job to help young people find the career that would fit them best. By doing this, I hoped that my clients could avoid the emotional turmoil that characterised my school-to-work transition. However, I soon began to wonder how feasible it was for young people to choose long-term career paths. Most did not have enough life or work experience to be able to make informed choices. Those who had sufficient experience to make such choices often had to change their plans because they could not gain entry into the required training programme or they were not able to find employment in their field. As I reflected on my own career and those of my clients, it seemed that unplanned events often had more influence on individuals' career pathways than the rational career decision making processes that are advocated by traditional career counselling. The present study explores how young people answer Alice's question as they negotiate the school-to-work transition.

This chapter begins by outlining the key research questions that this thesis seeks to answer and provides a justification for the study. Following this, definitions of key terminology used in this thesis are provided. Discussion then moves to an examination of the personal and structural contexts that frame the study. The chapter concludes with an outline of the structure of the thesis.

Key Research Questions

This study seeks:

- To understand how young people in Canada who successfully complete secondary school construct their career pathways;
- To examine how young people's resources (individual, family, social and environmental) and the messages they receive influence their career pathways;
- To consider the implications of these findings for the ways that parents, career advisors, and policy makers can assist young people in making positive career-related transitions after graduating from secondary school.

The findings of this study were based on interviews with 47 young adults who had graduated from secondary school. The sample is a sub-set of a larger sample that was recruited for a research project funded by the Canadian Education and Research Institute of Counselling (CERIC)¹ in conjunction with the Resilience Research Centre (RRC).² A more detailed account of the relationship between the RRC study and the study is provided in Appendix F. The study used a qualitative approach that was informed by a constructivist grounded theory methodology.

Need for Study

The school-to-work transition is one of the most crucial times in young people's lives. Which career path they take can have far reaching consequences not only for their

¹ CERIC is a charitable Canadian organisation whose mission is to encourage and provide education and research programmes related to the development, analysis, and assessment of current counselling and career development theories and practices in Canada.

² The Resilience Research Centre is a research institute that is part of Dalhousie University located in Halifax, Canada. The Centre's research focuses on studying the social ecology of resilience. The Centre has partnered with a number of researchers to conduct research projects both nationally and internationally. The research project entitled "Stories of Transition" within which this present study was nested was the first time the RRC had conducted a study that focussed on the career development process.

work life but also for interlinked transitions such as the step into independent living, partnership formation, and parenthood (Hiebert, 1993; Schoon & Silbereisen, 2009). Perhaps because of its importance, the transition from secondary school to tertiary educational and occupational pathways is by most accounts an anxiety ridden and bewildering process for many young people and their parents (Krumboltz, 1992; Krumboltz & Coon, 1995; Vignoli, Croity-Belz, Chapeland, de Fillipis, & Garcia, 2005). Much of this anxiety is generated by a fundamental misunderstanding about how young people should be approaching the decisions in front of them. Mitchell and Krumboltz (1987), for example, have identified seven myths that confound people as they make career decisions. These include, among others: “I must be absolutely certain before I act,” “Career development involves only one decision,” and “If I change, I have failed.” In contrast to these myths, results from recent longitudinal studies reveal that the transition from secondary school to full employment is often complex and circuitous (Andres, 2002; Bowlby & McMullen, 2002).³

Despite research findings, the myths Mitchell and Krumboltz identified over 20 years ago still prevail. I, like Peavy (2001), have observed a distance between the way many young people, parents, guidance counsellors, and career counsellors think career decision making is supposed to happen and the way it typically occurs. Prior to beginning the study, I had observed the persistence of these beliefs within Canadian society and wondered if this was due in part to the fact that no alternative understanding of the nature of the transition from school to work had placed itself within the public consciousness.

The present study builds on the considerable body of knowledge generated by national and international studies of youth transitions in Western countries. In Canada, three provincial and national longitudinal studies, principally quantitative, have been conducted in recent years (Andres, 2002; Looker & Magee, 2000; Shaienks & Gluszynski, 2007). However, there appears to be a gap in the Canadian context in terms of understanding the complex and often idiosyncratic mix of factors that give rise to the more generalised patterns that these large studies have produced regarding young people’s

³ A follow-up survey of secondary school graduates in Nova Scotia ten years after graduation reported that 62% pursued the occupations that they had chosen at the time they graduated (NSDOE, 2007a). However, the study used the completion of their chosen tertiary program as a proxy for pursuing their chosen occupation.

transitions. For example, the Canadian Youth in Transition Survey found that 25% of those surveyed changed their tertiary programmes three times or more (Shaienks & Gluszynski, 2007). While it is useful to know that it is common for young people in Canada to change their educational pathways, this fact tells us nothing about the dynamics behind these changes. This study builds on the work done by researchers who have conducted qualitative studies in New Zealand (Vaughan, Roberts, & Gardiner, 2006), Australia (Dwyer, Smith, Tyler, & Wyn, 2003, 2005) and the United States (Arnett, 2000a, 2004). I anticipate the results being of use not only to career practitioners, families, and young people, but also helpful in informing future studies concerned with the school-to-work transition.

Definition of Key Terms

The following clarifies how key terms are used in the study.

Career

The study uses a broad definition of “career” and encompasses an individual’s lifelong progression in learning and work.

Career Development

The definition of “career development” for this study is that presented by Hiebert (2005):

Career development refers to a life-long process of managing learning, work, and transitions in order to move toward a personally determined and evolving preferred future. From this perspective, an individual’s career develops over time regardless of whether they are planful about the process or leave it to chance. (p. 4)

Career Pathways

“Career pathways” are defined for the purpose of this thesis as the combination of education and/or employment locations that young people construct for themselves over time.

School-to-work Transition

The term “school-to-work transition” is used in this thesis to define the activities in which young people engage as they move between secondary school and continuous full-time participation in the labour market. These activities may include university education, vocational education, work experience, unemployment, travel, casual work, and fixed-term employment. The school-to-work transition is part of the lifelong career development process.

Career Decision Makers

For the purpose of this thesis, the term "career decision makers" denotes people of all ages who are engaged in a process of determining what their next career steps will be. This term helps to distinguish between research findings and best practices that are specific to young people and those that also apply to older people. Generally, research conducted in the career development field and recommendations about best practices are not focussed solely on young people.

Career Guidance

The term “career guidance” used in this thesis is the one provided by Watts and Sultana (2004) and is a synthesis of the definitions used by the Organisation for Economic Co-operation and Development [OECD] (2004a), the European Commission (Sultana, 2003) and the World Bank (Watts & Fretwell, 2004). It refers to:

services intended to assist individuals, of any age and at any point throughout their lives, to make educational, training and occupational choices and to manage their careers. These may include services in schools, in universities and polytechnics, in training institutions, in public employment services, in companies, in the voluntary/community sector and in the private sector. The services may be on an individual or group basis, and may be face-to-face or at a distance (including helplines and web-based services). They include career information (in print, ICT-based and other forms), assessment and self-assessment tools, counselling

interviews, career education and career management programmes, taster programmes, work search programmes, and transition services. (p.107)

Personal Location as a Career Guidance Counsellor

In response to both my challenges negotiating the school-to-work transition and my professional experiences helping young people make career-related decisions, I became interested in how to better support young people through the school-to-work transition. The career literature made it clear that many parents played a part in their children's career decision making and that their influence could be both positive and negative (Magnusson & Bernes, 2003; Montross, Kane, & Ginn, 2004; Rainey & Borders, 1997; Young & Friesen, 1992). These findings coincided with the reports of young people in my career counselling practice that detailed both the positive and negative roles that their parents played in their career planning process.

This literature led me to develop and pilot a three-session programme for the parents of secondary school students that assisted them to develop the knowledge and skills they needed in order to play a constructive role in their children's career development. Over a period of four years, I delivered this programme (Parents as Career Coaches) to hundreds of parents in Nova Scotia (Nova Scotia Department of Education [NSDOE], 2006). These extensive interactions with parents provided insight into parents' perspectives on the way that they believed their children would transition from school to work. Most parents seemed to believe that the typical transition pattern for young people was to go directly from secondary school to tertiary education and then into full-time permanent employment. It was the contradiction between how career decision making was supposed to occur and how it seemed to happen for most that stimulated my interest in conducting the present study.

During the past two years, I have also had the opportunity to present some of the preliminary findings of this study in an interactive workshop format to secondary school guidance counsellors and career counsellors. The focus of the workshops was building professional understanding of the need to help young people engage both in planning and in staying open to altering their plans as circumstances changed. As a result of delivering these workshops, I gained some insight into the way that professionals ignore the

uncertainty that is part of so many young people's career pathways. As my study progressed, I began to wonder whether the turmoil that many young people encounter in the school-to-work transition (like my own) might be related to their discomfort with this uncertainty. As one 23-year-old participant said: "You panic and throw yourself at something, that's how you end up hating your life."

My personal location impacted on this research project in a number of ways. My own lived experience sensitised me to look for disorder in participants' career pathways even when they appeared to be orderly. For example, as discussed in Chapter Five, Kirsten decided to become a chemical engineer when she graduated from secondary school and then followed her chosen career pathway in a linear fashion. However, when I explored this with her, it became apparent that it had not been as straightforward as it appeared. Kirsten knew little about her chosen field when she began and indicated that it was quite different than she had expected. There seemed to be an element of luck that the field actually met her needs and provided opportunities for her to use her skills and explore her interests. As well, the perspectives gained through my previous work with parents and professionals impacted on the analysis of this study's data. In Chapter Seven, I suggest that parents' and professionals' expectations about the ways that the school-to-work transition should occur do not reflect the way it occurs for most young people.

Both my professional and personal experiences made me an insider in some respects in relation to the topic under investigation. Although not an insider in the sense of being a young adult myself, I was well versed in the topic as a result of related personal and professional experiences. This location as an insider predisposed me to assuming too much and not exploring alternative reframes for the findings (Dwyer & Buckle, 2009). Chapter Four contains a discussion of my efforts to scrutinise my findings through member checking and peer debriefing to ensure that the findings were representative of participants' experiences rather than simply a reflection of my own bias. In addition, contact with my supervisors was made on a regular basis during data collection and analysis to discuss the emerging findings and to examine my interpretations.

Context of the Study

The investigation for this research occurred within a wider context of economic and political changes that have impacted on the way that young people in western countries transition from secondary school into the workforce. The delineation of the context of this study is critical because each generation faces a specific set of life circumstances that influences the way that they transition into adulthood (Dwyer et al., 2005; Schoon & Silbereisen, 2009).

This section provides an overview of the social context in Canada within which research participants' career pathways unfolded. It highlights some of the key issues for young people navigating the school-to-work transition. As compared to previous generations in Canada, research participants faced higher levels of student debt, increased levels of underemployment, a more precarious economic location, and the need for more tertiary education. Similar dynamics have been observed in New Zealand and other western countries where there is "a growing tendency for youth to remain in education for longer periods" and many young people "have difficulty obtaining decent, stable, long-term employment and may experience sequences of short-term jobs, be forced to take jobs below their skill level, or move frequently between sectors and industries" (United Nations, 2007, p. 208). As in most OECD countries, young people in Canada receive limited career guidance.

Tertiary Education

Until recently, the transition to adulthood in Canada was compressed into a relatively short timeframe (Beaujot, 2004). Most youth entered the workforce directly after graduating from secondary school. Those who went on to tertiary education were generally able to find attractive positions immediately after graduation. Today's Canadian youth face a much different reality. Employment prospects for those without tertiary education are becoming increasingly limited. As a result of structural changes in the economy and the increasing use of technology in traditional industries, the skill requirements for many entrance-level jobs has increased substantially in recent years (Baer, 1999). Since 1990, the number of jobs in Canada that were filled by those with university degrees doubled from 1.9 million to 3.8 million. During that same period, there were 1.3 million fewer jobs for

those who had not completed secondary school or a tertiary certificate (Association of Universities and Colleges of Canada, 2007).

Without tertiary education, young adults in Canada have a difficult time finding jobs that provide economic security (Beaujot & Kerr, 2007). Bachelor's degrees and polytechnic diplomas have become the standard credentials for entry into many occupations. As a result, 82% of Canadian secondary school graduates pursue further education and training within three years of graduation (Shaienks & Gluszynski, 2007).

It has become increasingly common for young people to obtain more than one tertiary credential. In the Canadian Maritime Provinces,⁴ where this study was primarily conducted, 72% of all first degree holders who graduated in 1999 returned within five years for additional tertiary education (Maritime Provinces Higher Education Commission [MPHEC], 2006). Graduates from liberal arts and science degree programmes were more likely to return to tertiary education than those who graduated with applied or professional undergraduate degrees. The most common reason cited by young people in the Maritimes for going back to university was to improve their chances of finding employment or improving employment opportunities. Amongst liberal arts and science graduates, 62% returned to tertiary education for this reason, while 41% of applied arts and sciences/professional graduates gave this as their reason for pursuing more training (MPHEC, 2008). Not surprisingly, Canadian provinces with stronger labour markets have fewer people returning for further tertiary training. In Alberta, only 25% returned within two years for more tertiary education (Sorensen, 2002).

The need to invest in tertiary education significantly increases the time it takes young people to transition from secondary school to full-time employment. This transition now takes, on average, eight years for young adults in Canada to complete (Franke, 2003).

Student Debt

Over the past twenty years, tuition fees for tertiary programmes in Canada have increased substantially while government grants to students have been reduced (Berger, Motte, & Parkin, 2007). As a result, students and their families have had to take out larger

⁴ The Canadian Maritime provinces include Nova Scotia, Prince Edward Island and New Brunswick. Most of the research participants in this present study were residing in Nova Scotia and Prince Edward Island at the time they were interviewed.

student loans to pay for tertiary education. Young people in Canada graduating from polytechnics and universities in 2000 owed 76% more than those who graduated in 1990 (Statistics Canada, 2004). Approximately half of students graduating with a bachelor's degree left university without any debt; however, the other half had an average debt load of \$20,000. Close to 15% owed more than \$25,000 when they graduated.

The level of student debt is particularly high in the Maritime Provinces. Thirty per cent of university graduates in 2007 owed \$40,000 or more (MPHEC, 2008). High levels of debt make it difficult for graduates to pursue further education which might improve their chances of obtaining better employment. Students who graduated with \$40,000 or more of debt were significantly more likely to say that they were not planning to return for more education or that they were going to delay returning for a year or more (MPHEC, 2008). Although speaking of the American context, Draut's (2006) observations about the impact of high levels of student debt appear to hold true for many young adults in Canada:

During the same time that a B.A. has become the new entry pass to the middle class, tuitions have soared and our federal financial aid system has fossilised ... The debt-for-diploma system is a pernicious beast. It stunts young adults' economic progress as they try to start their lives, draining precious dollars out of their paychecks for more than a decade. (p.34)

Underemployment

Young people with tertiary qualifications have distinct advantages in the labour market over those who do not. They are more likely to enjoy a higher quality of employment, higher earnings, and greater employment security than those who graduate from secondary school and do not do further training (Allen, Harris, & Butlin, 2003; Hausdorf, 2007). Tertiary credentials, however, do not guarantee that young people will find jobs that allow them to use the knowledge and skills that they have developed during their training. One-third of employed young people aged between 25 and 29 years with tertiary qualifications in Canada and the United States are overqualified for the work they are doing (de Broucker, 2005). Canada has one of the highest rates of reported over-qualification in the OECD. Brisbois (2003) compared over-qualification in Canada with

that in 16 other OECD countries and found that the percentage of workers under age 25 who felt overqualified (24 percent) was highest in Canada, followed by workers in the United States. As in most countries, the percentage in Canada feeling overqualified declined sharply with age, dropping in Canada for the 25-44 age group to 11.5 percent, under half that reported for the under-25 age group. However, the figures in Canada for the 25-44 age group were still relatively high among OECD countries, third highest among the 17 countries examined.

The degree of overqualification in the Canadian labour market may relate to an undersupply of jobs requiring highly skilled workers (Brisbois, Orton, & Saunders, 2008). Saunders (2008) has questioned whether the Canadian economy can provide rewarding careers for the increasing number of young people who are obtaining tertiary credentials.

Economic Location

Despite attaining higher levels of education, the relative economic position of young people in relation to older workers declined in Canada throughout the 1980s and 1990s. Between 1981 and 2001, the earnings of older men and women increased somewhat while those of younger people (aged 16-24) who were employed full-time, year-round, stagnated for younger women and declined for younger men (Morissette, 2002). Côté and Bynner (2008) argue that young people are disadvantaged by what they refer to as the “competition ratio.” A century ago, the number of Canadians between the ages of 15-29 and 30-64 was roughly equal. Longer life spans and decreasing birth rates have dramatically changed the ratio to one in which there is about half the number of those in the younger group as compared to the older group.

This change, in combination with structural shifts in the economy, means that there is intense competition for fewer well-paying jobs. Canada’s economy has moved in the last few decades away from agriculture, manufacturing, and primary production to an economic system based on the selling of knowledge, finished goods, and personal services (Myles, Picot, & Wannell, 1993). The erosion of the manufacturing sector has been particularly difficult for young people. In previous generations, it provided well-paying entry-level jobs for working class youth, and management positions for those in the middle class with tertiary training. These jobs have largely been replaced in recent years with low-paying

jobs in the service industry. Beaujot and Kerr (2007) have noted that while most young people have the same desire to have a stable job as did previous generations, this goal has been frustrated by economic and demographic realities. As Clark (2007) observed: “today’s young people face a labour market that earlier cohorts did not have to contend with, including an increasing wage gap with older workers, more temporary jobs, lower-quality jobs, fewer benefits, and more instability in employment” (p. 19).

Prior to the global recession that began in October, 2008, the economic situation appeared to be improving for young people.⁵ Morissette (2002) found in 2001 that Canadian youth aged 16-24 who were working full-time, year-round, were doing moderately better than young people were in the mid-1990s. The combination of a booming economy and the retirement of the first wave of baby boomers precipitated a labour shortage in some industries. Skilled young people were in high demand by employers. The majority of the data for the present study was collected prior to the onset of the global recession.

This section detailed the context in which research participants’ career pathways unfolded. Specifically, their school-to-work transition occurred in an environment where tertiary education was both increasingly required and more expensive. Despite the increased investment in education, the labour market was such that young people were often not able to attain jobs, at least in the short term, that were commensurate with their skills and training.

Career Guidance

During the last twenty years, mandatory career education courses have increasingly been adopted by schools and taught by regular classroom teachers in Canada (Team Canada, 2000). The courses usually contain a combination of career planning, personal exploration, and computerised career information. In addition, comprehensive guidance and counselling programmes have been adopted in some Canadian provinces, including Nova Scotia where the majority of this present study was conducted. These programmes reflect a strong developmental approach, systematically presenting activities appropriate to student

⁵ In this recession, unemployment has been concentrated among younger and older people (Crow, Hatton, Lyon, & Strangleman, 2009).

developmental levels and including achievable and measurable outcomes in the areas of personal, social, educational, and career domains (Gysbers & Henderson, 2006). The main thrust of comprehensive guidance programmes such as those in Nova Scotia is that guidance and counselling shifts from specialists working solely with individual clients to a comprehensive model that delivers programmes and services to students in the teaching institution (Gysbers & Henderson, 2006). In Nova Scotia, the stated aim of the life and career planning component of the programme is to help students acquire the knowledge, skills, and attitudes necessary to effectively manage their careers (NSDOE, 2007b).

Despite efforts to increase the provision of career guidance in secondary schools, what is abundantly clear from studies in Australia (Dwyer & Wyn, 2001), Britain (Ball, Macrae, & Maguire, 1999; Dyke, Foskett, & Maringe, 2005), and Canada (Pillay, 2004) is that the majority of young people either do not receive help with education and career choices or find the help that they do receive to be of little use. A Canadian study found that comments on counsellors and counselling services over a 15-year period after secondary school graduation revealed that young people attributed their poor planning for life to poor guidance programmes in secondary schools (Pillay, 2004). The study concludes that “generally, respondents felt that they needed to be more aware of career options, to have had more opportunities to explore career options, and to have a better understanding of how the choices they made in school would affect their futures” (p. 239). Another Canadian study across four provinces found that many students reported that they did not receive enough help connecting their course of tertiary studies with a career path while they were in school and that there was an overemphasis on university as the preferred option after graduation (Canadian Career Development Foundation [CCDF], 2003).

A key challenge faced by those who deliver career guidance services in Canada is that young people tend to prefer one-to-one assistance (CCDF, 2003). However, research that involved 758 schools in the Canadian province of Alberta determined that only about one in four secondary school students received individual career counselling (Team Canada, 2000). This is not surprising given the high ratio of students to guidance counsellors in most Canadian secondary schools. For instance, in 2003, the ratio of secondary school students to guidance counsellors across eight Canadian provinces ranged from 1:385 to 1:1000 for secondary school students with an average of 1:590 (CCDF,

2003). Moreover, Bezanson (2005) notes that in Canada it is estimated that most of the time and energy of guidance counsellors in schools is taken up trying to meet the needs of the 20% of the student population that seek help with making plans for tertiary education and the 10% that have a range of personal and psychological challenges. According to the OECD (2002), guidance counsellors in Canada devote a disproportionate amount of time both to dealing with students' personal problems and providing educational guidance to those who are progressing to tertiary education, leaving little time for guidance counsellors to address career issues or the needs of the majority of students.

The provision of career guidance to tertiary students is even more scant than that provided in the schools (Bell & Bezanson, 2006). In many OECD countries like Canada, career guidance services in tertiary institutions are either inadequate or nonexistent (Watts & Sultana, 2004). The OECD (2004a) found that career guidance services in tertiary institutions were often limited to assistance with choosing courses of study. Moreover, the fact that career guidance services are often provided by tertiary institutions means that young people may not receive impartial information and advice. A common supposition in terms of career guidance at tertiary institutions in Canada seems to be that students can manage their own transitions into the labour market without any support. While the career guidance services available in schools and tertiary institutions are inadequate, such services are often almost non-existent in many OECD countries like Canada for young people who are not attending an educational institution (OECD, 2004a).

Structure of the Thesis

The thesis is structured in the following way:

Chapter One

This chapter provides an introduction to the thesis, including a rationale for the study. It briefly discusses my personal location in relation to the project and the social, political, and economic context of the study.

Chapters Two and Three

These chapters discuss the literature that informs this study. Chapter Two begins by identifying key themes that emerged from a review of youth transitions studies conducted in North America, New Zealand, and elsewhere. A key finding from these studies is the contingent nature of young people's career pathways. Following this, three career development theories are examined in relation to the ways that they can help explain the school-to-work transition. A case is made for using chaos and complexity theory as the conceptual lens for analysing the data generated by this study because of its ability to shed new light on the school-to-work transition. Chapter Two concludes with a discussion of chaos-oriented approaches to career guidance.

Chapter Three examines the genesis of chaos and complexity theory and how it has been applied in social sciences with a particular emphasis on its use in the career development field.

Chapter Four

The research methods used in the study are presented in Chapter Four beginning with a rationale for using qualitative methods that were informed by constructivist grounded theory. This is followed by a delineation of the specific research methods used to select participants, generate data, and complete data analysis, along with ethical issues related to the study. The chapter concludes with a discussion about the steps taken to establish the trustworthiness of the findings.

Chapters Five and Six

Chapter Five introduces the key themes identified in the data analysis. The need to "find a career-related place" is shown to be a common challenge that participants faced in the transition from secondary school to tertiary education and employment. A typology is identified that delineates three search strategies that participants used to find a career-related place and two engagement strategies that related to their cognitions about the place they found. An analysis of the consequences to participants of using the various strategies is also provided.

Chapter Six analyses the factors that impacted on the strategies that participants used as they sought to find a career-related place. The chapter also explores the way that these factors were related to shifts in participants' strategy utilisation.

Chapters Seven and Eight

Chapter Seven considers how trait and factor, developmental, and chaos-oriented approaches to career development can contribute to an understanding of the typology that was developed based on the study's findings. It also explores the familial and societal messages that impact on the strategies that young people utilise to find a career pathway, including the unrealistic expectation that they have long-term, fixed career plans.

In Chapter Eight, a case is made for deemphasising the trait and factor approach in favour of more developmental and chaos-oriented approaches to career development that accept that change and unpredictability in young people's career pathways is normal. The chapter also presents six career design principles that provide guidelines for how young people can work with the ambiguity and uncertainty that are an inherent part of the school-to-work transition.

Chapter Nine

Chapter Nine concludes the thesis by outlining key findings from the study. It then draws conclusions about the implications of these findings for career advisors and policy makers. The final section of this chapter reflects on the research process and makes suggestions for future research.

Chapter Two

The School-to-work Transition

Introduction

This chapter reviews two bodies of literature: that concerned with youth transitions, specifically its focus on school-to-work transitions among emerging adults; and career development as it pertains to career planning. An overarching theme that has dominated the youth transitions literature in recent years is the increasing elongation and complexity of the school-to-work transition that is related to the growing propensity of young people to engage in what the OECD has referred to as “milling and churning” (OECD, 2000). Milling and churning is a process in which young people move between, or combine, various activities such as full-time work, part-time work, study, unemployment, or other activities such as travelling. The relationship between this process and identity exploration is discussed. A related theme of young people following career pathways without long-term plans is also examined. Discussion then moves to the variation that often exists between how young people and parents think the school-to-work transition is supposed to occur and how it unfolds for most youth. Following this, there is an examination of the debate regarding the extent to which structural constraints (factors external to the individual) and personal agency influence young people’s transition from school to work. The final theme considered is the personal responsibility that young people often take when their career pathways do not unfold as they had expected.

With regard to the career planning literature, there are three approaches that have been used that help to shed light on the school-to-work transition. Trait-and-factor theory was the earliest approach to career planning. It conceptualised career planning as a single point in time event. It was challenged by developmental theorists who explain career planning and the choices that follow as a process that evolves over time. More recently, a growing body of theory in the career development literature has incorporated the principles of change and uncertainty as central to understanding the career planning process. In this regard, the career planning literature shows some congruence with advances in theory occurring in the youth transitions literature that characterise the pathways taken by young people as being non-linear and unpredictable in nature. It is argued in this thesis that this

innovation has the potential to shed new light on young people's transitions and is the justification for selecting chaos and complexity theory as the conceptual lens for this thesis. The final section of this chapter reviews the career development literature in relation to the practical applications of a chaos-oriented perspective to career guidance.

The placement of this literature review before the findings chapters represents the conventions of thesis writing rather than the way that I engaged with the literature. While a preliminary literature review was conducted in order to prepare a thesis proposal and to identify sensitising concepts, an extensive review was not undertaken until after the initial phase of this grounded theory study was completed and theoretical codes were developed. The use of extant literature in this study will be discussed in detail in Chapter Four.

Key Themes Identified in the Youth Transitions Literature

This section outlines six key themes that have been identified through an exploration of the youth transitions literature in relation to school-to-work transitions and identity formation.

Elongation and Complexity of Young people's School-to-work Transitions

Results from longitudinal studies confirm that the transition from secondary school to full employment is often complex and circuitous (Andres, 2002; Bowlby & McMullen, 2002; Dwyer et al., 2005; European Group for Integrated Social Research, 2001). Alterations in the way young people transition from education to work are rooted in social and economic changes that have in turn led to the increasing need for young people to participate in tertiary education (Furlong, 2000; Higgins & Nairn, 2006). Young people seeking entry into most fields of work today require more qualifications than previous generations (Crompton, 1995). At one time, the majority of youth went straight from school to work with only a small minority attending tertiary education. It is now the majority experience in countries such as Canada, Australia, New Zealand, and Britain for young people to participate in tertiary education (Andres, 2002; Dwyer et al., 2005; Furlong, 2000; Higgins, 2002; Shaienks & Gluszynski, 2007). Bynner (2005) has observed that an extended school-to-work transition gives young people the opportunity to accumulate

human capital such as educational credentials and work experience that can be translated into better employment opportunities.

The elongation of young people's school-to-work transition also appears to be related to the process of milling and churning that has been identified in transition studies. The New Zealand Pathways and Prospects study (Vaughan et al., 2006) found that it was common for young people to engage in milling and churning (OECD, 2000). It has become usual for young people to experiment with different tertiary education programmes and jobs and to move back and forth between these locations (Brisbois et al., 2008; Wyn & Dwyer, 2000). Canadian and Australian studies indicated that more than 50% of young people changed their tertiary programmes at least once (Dwyer et al., 2005; Shaienks & Gluszynski, 2007). Moreover, the Canadian study found that 25% changed their programmes three times or more and about 15% dropped out before completing their programme (Shaienks & Gluszynski, 2007). The most frequently reported reasons for dropping out were: not enough money (18%), not liking the programme (18%), and wanting to work (17%).

The milling and churning continues for many young people as they move from tertiary education into the work force. The Australian Life Patterns Study found that many participants had engaged in "job transitioning" (Dwyer et al., 2005). A majority (61%) held from two to four jobs and a further 20% held five or more positions between the ages of 22 and 30. Even young people who appear to have made career choices may be milling and churning through "the guise of doing something likely considered to be more 'appropriate'" (Vaughan, 2005, p.181). For example, a young person may be enrolled in an occupationally specific tertiary education programme or be working in what would appear to be a long-term job but may not have made a commitment to that pathway.

Part of this job transitioning activity may be related to the process of identity exploration described by Arnett (2000a, 2004) in which young people seek out different experiences as a way of exploring their identities (explained later in this chapter). This dynamic was borne out in an American study of 10,000 young people aged 18 to 28 that found that close to 50% were unclear about what they wanted to do and engaged in "job surfing" as a way of helping them become clearer about their careers (Chaio & Gardner, 2007). It should be noted that the job transitioning that young people engage in is often not

voluntary. As a result of completing their tertiary education studies at a time when the economy was not doing well, many of the participants in the Australian Life Patterns Study who had followed linear paths up until graduation had a difficult time finding permanent work in their chosen areas (Dwyer et al., 2005). Hence, they had to take jobs outside of their fields while looking for work related to their studies.

By the age of 30, most participants in the Australian Life Patterns Study were married and in full-time career-related jobs (Dwyer et al., 2005). The increasing stability of young adults' pathways over time was also observed by Arnett (2004) in his study in the United States. However, there is still a substantial minority who continue to mill and churn for a variety of reasons. Dwyer et al. found that about 20% of the Australian 30-year-olds in their study were considering changing their employment. For some, the desire to change jobs related to having not found jobs that they liked doing. For others, it was associated with working conditions and pay. Côté (2006) observed a similar dynamic in his study of young Canadians in their late twenties.

Vaughan (2003) points out that there are two ways that milling and churning can be interpreted. The first reading of this phenomenon focuses on process outcomes such as identity exploration that provide a way for young people to try various options and lessen the chances of making uninformed career choices. The alternative interpretation centres on labour market outcomes and views milling and churning as a “problematic and economically wasteful” (p.8) period of time for both young people and employers.

There are dangers associated with milling and churning if it goes on for an extended period of time. A young person who unsuccessfully cycles through a number of tertiary education programmes or continually changes jobs may find themselves in their late twenties having accumulated little in terms of human capital. From the perspective of human capital theory, a young person who has undertaken an extended transition without gaining further educational credentials and career-related work has wasted their time (Beaujot, 2007). As well, they may become so dispirited by the process of milling and churning that they abandon the challenge of finding a career pathway that is congruent with their identity (Carpenter, 2008).

While milling and churning has become common, it is certainly not the case for all young people in western countries. Many young people today still make remarkably linear

school-to-work transitions (Arnett, 2004; Bradley & Devadason, 2008; Dwyer et al., 2005; Schoon, Ross, & Martin, 2009). This is particularly the case for young people who complete their tertiary education with an occupationally-specific credential such as engineering, licensed practical nursing, or carpentry, provided that they like the work it leads to and can find employment in their chosen fields.

Engagement in Identity Exploration

Recent transition studies have shown that identity formation is central to the school-to-work transition (Arnett, 2004; Dwyer et al., 2005; Vaughan et al., 2006). A key process that occurs during this period is one in which young people are attempting to determine the kind of person they want to be and what that means in terms of satisfying work (Arnett, 2004; Vaughan & Roberts, 2007). The notion of vocational choices as being a mechanism to implement one's self-concept is not new. Super (1957, 1981) posited this connection over fifty years ago based on the longitudinal Career Pattern Study that he began in the early 1950s.

The process of identity exploration is also fundamental to Arnett's (2000a, 2004) concept of "emerging adulthood." Based on a qualitative study of American young adults, he argues that the elongation of the school-to-work transition has resulted in the period between the late-teens and mid-twenties becoming a distinct period developmentally in which young people engage in identity exploration. Partially because of the increasing need to obtain tertiary education in order to find desirable employment, young people are delaying getting married and having children. In the early 1970s, the median age of marriage in Canada was 21 for women and 23 for men. By 2001, this had increased to 26 and 28 respectively (Beaujot, 2004). A similar trend has occurred in Europe and the United States (Finch, 2006). This delay in taking on responsibilities associated with adulthood gives young people more time to explore who they are and what it is that they want to do. This stands in contrast to previous generations in which the pressures of marriage and parenthood required most young people to decide how they were going to make a living in their late teens and early twenties (Beaujot, 2004).

Along with Arnett's work, several recent studies have found that young people construct their identities through experimentation with education and career pathways

(Dwyer et al. 2005; Vaughan & Roberts, 2007). Flum and Blustein (2000) have shown that this is a reflexive process. Young adults become clearer about who they are and what they want from life by engaging in tertiary education, paid and unpaid work, and a variety of extracurricular activities. Just as importantly, they become more aware of what they do not want to do and who they do not want to be. This process of exploration occurs in different ways. Some explore in a relatively coherent and organised way while others engage in more haphazard approaches (Flum & Blustein, 2000; Schwartz, Côté, & Arnett, 2005).

The need to construct an identity is increasingly a requirement of a postmodern world that no longer offers young people a stable, ready-made sense of who they are. According to Law, Meijers, and Wijers (2002), the requirements for identity development have changed since the mid-1970s “from a relatively simple psycho-social learning process on a low level of reflexivity, into a complex learning process on a high level of reflexivity” (p. 432). This requires young people to engage in a “project” or “journey” of self-discovery rather than taking on a role that is preconceived (Dwyer et al., 2005).

Pollock (2008) contends that emerging adulthood is best understood as a phenomenon that applies to a subgroup of young adults. The opportunity to engage in identity exploration through an extended school-to-work transition is one that is not available to all young people. Parenthood, social class, and cultural norms all impact upon the degree to which the late-teens and early twenties can be used as a period of exploration (Arnett, 2002; Blustein, 1997; Flum & Blustein, 2000). There is evidence of polarised transition experiences in which young people from privileged backgrounds are more likely to participate in extended education and to delay parenthood while their less-privileged peers experience more accelerated transition into adulthood (Andres & Adamuti-Trache, 2008; Bynner, 2005; Schoon et al., 2009). Furlong (2000) suggests that for many disenfranchised youth who have few real choices this time is less of an identity project than an “attempt to survive in a world which offers them little security or satisfaction” (p. 133).

A study conducted by Blustein et al. (2002) offers insight into the way that class impacts upon the opportunities that a young person has to engage in the process of identity exploration as described by Arnett (2000a, 2004). Blustein et al. found that those whose families had a higher socioeconomic status (HSES) differed in significant ways from those whose families had a lower socioeconomic status (LSES). Participants from a HSES

background were more likely to be enacting their interests and goals in their work lives, more likely to be engaging in exploratory activity, and were more likely to engage in future planning than their LSES counterparts. Blustein et al. attributed these differences primarily to differential access to resources. HSES participants had more instrumental and agentic help (job leads, specific ideas about where to receive training, and advice about vocational options) than LSES participants. The findings of their study support Osipow and Fitzgerald's (1996) contention that social class not only impacts upon the financial and instrumental resources that are available to them but also shapes a young person's behaviour in relation to the school-to-work transition.

Even those from privileged backgrounds may not be able to engage in a process of identity exploration because of pressure from parents or other authority figures to pursue a high-status career path. Instead of developing their identity through a process of exploration, they adopt a "ready made identity" that is "drawn from conformity to values and expectations of significant others" (Flum & Blustein, 2000, p.393). Marcia (1993) highlighted lack of exploration as a central characteristic of those who have conferred, as opposed to constructed, identities.

Arnett (2002) has also pointed out that individual factors can impact upon the degree to which a young person engages in identity exploration. Personality characteristics such as curiosity and adaptability have been shown to be predictors of career exploratory behaviour (Kerka, 2001). Increased exploratory activity has also been associated with motivation, tolerance for ambiguity and risk, and self-efficacy (Blustein, 1997; Young & Rodgers, 1997). In contrast, self criticism, insecurity, and guilt have been shown to hinder exploratory behaviour (Clark, 2000; Young & Rodgers, 1997). A number of relational factors have also been linked to a young person's propensity to engage in exploration. Having positive family relationships promotes exploratory behaviour and risk-taking in that it provides a young person with a secure base to return to as they experiment with different options (Blustein, Walbridge, Friedlander, & Palladino, 1991; Ketterson & Blustein, 1997). Close peer relationships have also been shown to increase exploratory behaviour (Felsman & Blustein, 1999).

Arnett (2002) emphasises that while a period of identity exploration may seem like a luxury, it is often stressful for young people. The degree to which exploration is a positive

experience may have to do with what motivates it. The New Zealand Pathways and Prospects study found that participants experienced exploration in quite different ways (Vaughan et al., 2006). For the group that they referred to as “confident explorers,” exploration “*emerged from* positive experiences and allowed them to *continue* expanding their options, and making choices” (p. 89, original emphasis). In contrast, the group that they referred to as “anxious seekers” were driven to exploration because of self-doubt about their choices, and engaged in exploration in an attempt to develop a back-up plan. For this group, “exploration was not a warm, exciting, activity but was instead riven with paralyzing doubt” (p. 89).

Taking Career Pathways Without Plans

While it may be taken for granted that a young person who is following a career pathway has engaged in some level of thoughtful career decision making, several studies have questioned this assumption. A study of the initial post-16 choices⁶ of British youth found that most were “based on weak commitments, fuzziness about the future and limited information” (Ball et al., 1999, p. 209). Similarly, Bryce and Anderson (2008) observed in their study of disadvantaged youth in Australia that few systematically investigated career options. This corresponded with the observations of Schneider and Stevenson (1999) who found that only a minority of the American young people they interviewed indicated that they had sought detailed information about career pathways they were either seriously considering or actively pursuing. Grubb (1997) reported that young people were particularly uninformed about the economic returns of their occupational choices.

Ball et al. (1999) also found that the imagined future of participants in their study varied greatly. While some had a relatively clear vision of a future that was probable, others had an image that was vague and full of uncertainties. Another group had no “imagined future” at all that could be used to guide their decision making. They also concluded that the “unresearched, unstable or desperate choices” (p. 209) of participants

⁶ “Post-16 choices” is the term used to refer to the alternatives that are available to English 16-year-olds. In the English education system, youth face important career-related choices at this age. At that point, they may choose to leave school to work or to continue on with A-levels. Their choices in terms of A-level exams determine the type of tertiary education programmes that will be available to them.

were frequently turned into firm decisions about career pathways as a variety of internal and external factors such as time pressures, unplanned events, and pressure from significant others exerted their influence.

Collectively, the findings of these transition studies question whether most young people choose career pathways in any meaningful way. Most select from the opportunities that are apparent in their environment rather than seeking out novel ones that might be more satisfying. Choice for many young people is simply one in which they say “yes” or “no” to opportunities that are readily available to them (Hodkinson, Sparkes, & Hodkinson, 1996). These findings contrast sharply with the prescriptive career decision making models outlined in the career development literature that advocate it occurring in a logical and rational fashion (see for example, Gati, Fassa, & Houminer, 1995; Gati & Tal, 2008).

Based on the findings of the transition studies cited above, it would appear that career decision making occurs in an incremental fashion rather than through well-considered long-term planning. Studies of German, British, and New Zealand young adults have found that, while participants were committed to their short-term plans, few had long-term visions about what they were hoping to do (Evans, 2007; Vaughan & Roberts, 2007). This incremental style of decision making means that career selection is not a point in time event but rather something that evolves. Rather than choosing a preconceived career pathway, many “produce” a unique career by engaging in an idiosyncratic combination of training, study, and employment (Vaughan & Roberts, 2007). This line of thinking aligns with theorists in the career development field who have abandoned the construct of career because it connotes occupational and economic locations such as doctor, lawyer, engineer, or teacher that cannot be achieved by most (Blustein, 2001; Richardson, 1993).

The fact that many young people are following pathways without plans can perhaps be explained by the differentiation that Krieshok (2001) makes between “career decidedness” and “career commitment.” He observes that young adults often find themselves in situations where circumstances force them to commit to a choice before they are ready to do so. For example, after secondary school, many young people are in positions where they must choose a polytechnic or university programme. Hence, they may decide to take an occupationally specific programme such as nursing without having committed to a career in the field. Krieshok maintains that it is important not to confuse the

commitment that a young person has to completing a particular tertiary programme with their choice of an occupation that they want to pursue.

Variations Between Expectations and Realities

There appears to be a tension between the expectations of young people and those around them of an orderly career progression and 21st-century realities (Higgins & Nairn, 2006; Moen, 2009; Strauber & Walther, 2006). Many of the participants in the Australian Life Patterns Study found the transition to be harder and longer than they had expected. By the time they were 30, they began to question their earlier assumptions that their career paths would be predictable. Dwyer et al. (2005) described the young people in their study as “immigrants in time” who were confronted with an “on-going mismatch between present-day realities and the established ‘time-line’ of youth transitions into adulthood idealised by Gen A [their baby-boomer parents]” (p. 5). Stokes and Wyn (2007) claimed that the experiences of baby-boomer parents are the basis for normative assumptions about the way that the school-to-work transition should occur. In comparison to the supposed linear pathways taken by their parents, today’s young people appear to be “floundering” (Hamilton, 1990; Salomone & Mangicaro, 1991; Super, 1957), “lost” (Howe & Strauss, 2000), “directionless” (Schneider & Stevenson, 1999), and “on hold” (Côté, 2000).

While most parents, teachers, and policy makers are well aware that the landscape has changed dramatically in the past thirty years, many expect what Higgins (2002) referred to as an “extended linear” model of transition in which young people proceed from secondary to tertiary education and then directly into full-time employment. This mystifying paradox is captured nicely by Dwyer and Wyn (2001) who remark that while we “know” that non-linearity has increasingly become the norm for people of all ages, many “read our own pasts into an experience that we, in another voice, say has been transformed” (p. 2). Given the power of these widely held expectations, it is not surprising that young people often experience a great deal of pressure to have a career plan despite the reality that most plans never unfold as envisioned (Bright & Pryor, 2008; Peavy, 2001). McAlpine (2009) found, in her study of American undergraduate students in their senior year, that most felt that others expected that they should have a career plan. Several participants in her study recalled being asked about their future plans since they were in

preschool. One participant stated that “there’s a lot of pressure on high schoolers these days and, like, when you enter your first year of college to decide what you want to do and if you don’t know what you want to do, people look down on that” (p. 100). Almost all of the 58 participants in her study felt that they should have plans when they graduated from university and that it reflected badly on them as individuals if they did not know what they were going to do after graduation. McAlpine found that, typically, the expectation to have a plan was not stated explicitly. Rather, participants perceived this expectation through the numerous questions they were asked about their plans. In her study participants reported that they interpreted being asked: “What are you doing after graduation?” as an expectation that they should have an answer. Some of the conventional wisdom that young people hear can create further confusion. Gray (2000) has noted that two of the most pervasive “pearls of wisdom” young people hear are: “You’d better go to university right after high school or you never will” and “Just get a degree and everything will work out” (p. 121).

Despite the ubiquity of non-linear career pathways, this characteristic of career development tends to be ignored or explained away. Bloch (2005) observed that people both expect and want their careers to be ordered but often experience them as being illogical. Despite their personal experience, they believe that most people’s careers unfold in a logical way and that others expect their careers to be the same. This is why people “keep to themselves the strange links between events, links they describe as ‘just luck’ or coincidence. In truth, it is the secret career stories that reveal the reality” (p. 198).

The distance between expectations and reality often extends to young people themselves. Earlier in this section, it was pointed out that most young people do not have long-term career goals but rather make decisions on an incremental basis. However, this is not what young people typically think is the right approach. The Pathways and Prospects study in New Zealand ascertained that nearly all of the participants in their study aged 17 or 18 thought that not having goals was negative despite not having goals themselves (Vaughan et al., 2006).

There also appear to be variations between many young people’s expectations and the opportunities that are available to them in the labour market. Rudd and Evans (1998) found that there was a sharp contradiction between the optimistic perspective young people in Britain had about the economic prospects for their lives as compared to the relatively

unpromising economic conditions in the country at the time. Despite their parents having come of age at a time when the American economy was experiencing unprecedented growth, Arnett (2000b) ascertained that 89% of the young people surveyed in the United States expected to equal or surpass their parents in terms of career achievement. Those from relatively low social class backgrounds were even more confident that they would do better than their parents than those from relatively high social class backgrounds.

The expectations of young people in North America immediately after secondary school seem to be particularly unrealistic. Based on the longitudinal analyses of three cohorts of young people in their final year of school, Reynolds, Stewart, MacDonald, and Sischo (2006) have provided evidence that secondary school students in the United States have become progressively more unrealistic about their future achievements over the past twenty-five years. A Canadian study found that over 50% of secondary school graduates said that they wanted to earn a Masters or PhD (Andres, 2002). In the late 1990s, there were five times as many administrative jobs and seven times as many jobs in the service sector in the United States as there were teenagers who were interested in doing that work. In contrast, many more young Americans wanted to be professionals than there were openings (Schneider & Stevenson, 1999). While the expectations of young adults tend to shift downward over time, they continue to remain remarkably high (Andres, 2002; Dwyer et al., 2005).

There are many positive aspects to the optimism that young people express in relation to their career pathways. Optimism has been shown to relate to higher levels of career planning and career exploration (Creed, Patton, & Bartrum, 2002). Patton, Bartrum and Creed (2004) have suggested that optimism plays an important role in keeping young people engaged in planning and exploration when they experience setbacks. Arnett (2000b) observed that optimism about their personal futures allows young adults to proceed with confidence in an uncertain world. However, there is a downside for young people in engaging in what Pryor and Bright (2006) have referred to as “mindless optimism.” While high expectations can increase motivation and a willingness to work hard toward one’s goals, those who have unrealistic and uninformed expectations often pursue educational and occupational pathways for which they either have no interest or ability (Reynolds et al., 2006; Schneider & Stevenson, 1999). In other words, for some, high expectations lead to

disappointment and discouragement rather than success. Furthermore, a young person who spends extensive time on a career pathway that has a low probability of success risks losing the opportunity to find a more suitable one (Reynolds et al., 2006).

The variation between others' expectations and the realities of the school-to-work transition is likely to be at least partially responsible for the criticism many young people experience when their pathways do not match the traditional pattern of transition (Dwyer et al., 2005). As well, they are likely to become self-critical when they measure themselves against the yardstick of normative assumptions that Moen and Roehling (2005) characterise as "the three-phase, lockstep, career regime of middle-class men's lives: education, then continuous full-time employment, then the continuous full-time 'leisure' of retirement, typically at age sixty-five" (p. 11).⁷ Moen and Roehling maintain that the cultural imperative to follow a linear pathway underpins what they refer to as the "career mystique." They define the career mystique as the ingrained cultural belief that continuous long hours of hard work throughout adulthood is the path to status, security, and satisfaction. As a result of these normative assumptions, those who experience turbulent career pathways have been seen and often see themselves as deviant (Moen, 2009).

Interaction of Structural Constraints and Personal Agency

A common theme in the youth transitions literature is the impact that structural constraints such as class, gender, and ethnicity have on the choices available to young adults (see for example, Andres & Adamuti-Trache, 2008; Bynner, 2005). This was the focus of most of the youth transitions studies conducted prior to the 1970s (Evans, 2002; Goodwin & Stokes, 2005). More recently, there has been recognition that young people can shape their experience to some degree by responding to structural influences (Rudd & Evans, 1998). There has also been interest in how the theory of individualisation might help to better understand the transition process for young adults (Pollock, 2008). Based primarily on Beck's (1992) work, it describes the processes by which individual decisions

⁷ The variations between others' expectations and the realities of the school-to-work transition create conflicting messages for young people. They are expected to follow a linear pathway after secondary school which is not possible for most. In an attempt to hold two cognitions that are inconsistent, they experience what Festinger (1957) has referred to as cognitive dissonance.

have become more important as the proliferation of choices and the need for self-reflexivity have led to an increased onus on young people to increase their exercise of personal agency over their own lives (Côté, 2002; Schwartz et al., 2005; Vaughan & Boyd, 2005; Wyn & Dwyer, 2000).

For close to twenty years there has been a “perennial structure-agency debate” in the youth transitions literature with differing views about the extent to which people are free agents able to determine their destinies as opposed to being “sorted and channelled by structural forces” (Côté, 2002, p. 118). The Australian Life Patterns Study found that both structural and individual factors played a role in determining the outcomes of the transition from school to work (Dwyer & Wyn, 2001). While both gender and family background were important influences on the way in which young people made transitions, they also found that flexibility and personal choice played a role in determining their outcomes.

Based on results from an Anglo-German study, Evans (2002, 2007) has proposed a “middle ground” theory of bounded agency that takes into account the interrelationships between structure and agency by highlighting the role of personal agency while emphasising that it is circumscribed by constraining influences. A range of individual and contextual factors have been identified as impacting on the career pathways taken by young people. Poor academic achievement, limited parental resources, and mental health issues have all been shown to increase the likelihood that a young person will experience long-term unemployment (Caspi, Wright, Moffitt, & Silva, 1998; Wiesner, Vondracek, Capaldi, & Porfeli, 2003).

Evans (2002) emphasises that the exercising of personal agency along with the right supports makes it possible for some young people to override structural disadvantage. For example, a young person may want to pursue a career in office administration but may find it difficult to do so without the emotional and financial support of her parents. Furthermore, the economic disadvantage she grew up with means that taking on a large debt to take the required two-year programme is out of the question. Her pathway is clearly bound. However, she is able to overcome some of the structural disadvantage through working hard and getting assistance from others. Through a family contact, she is able to find employment at a non-profit organisation where she seeks out mentoring from her supervisor. Her supervisor suggests that she contact the government human resources

development programme to explore funding opportunities to take an office administration programme. When she finds out that there is not a seat available at the institution in her community, she relocates in order to attend one that has an opening. Through exercising personal agency, this young woman is able to create and respond to new opportunities (Heinz, 1999).

Taking Personal Responsibility for Career Pathways

Popular discourse in western countries suggests that more choice is better (Schwartz, 2004). However, a case has been made that while some choice is good, too much choice leads to dissatisfaction with the choices that have been made. The more choices a young person has the more they second-guess themselves and experience buyer's remorse (Iyengar & Lepper, 2000; Schwartz, 2004). The New Zealand Pathways and Prospects study found that this was particularly the case for a group they categorised as "anxious seekers" (Vaughan et al., 2006). This group was overwhelmed by information and experienced the most doubt about their choices. In turn, they were most dissatisfied with the choices they made.

Perhaps the most insidious aspect of the proliferation of choice is that it "responsibilises" young people if things go badly (Vaughan, 2004; cited in Vaughan et al., 2006, p. 34). Having more choices requires more decisions which in turn increases the likelihood of making a less than optimal choice (Vaughan & Boyd, 2005). However, the emphasis on the personal agency of young people downplays the reality that their choices are limited by structural constraints and labour market conditions (Furlong & Cartmel, 1997; Higgins & Nairn, 2006). This results in young people experiencing failure in terms of their career pathways as an intensely personal problem.

A series of Anglo-German studies found that the majority of young adults in the studies (18-25 years of age) took personal responsibility for their situation. Most believed that if someone "failed" in life that it was their own fault and related to a lack of effort and determination (Evans, 2007). Interestingly, the British cohort scored higher than the German group on crediting failure to the individual. The British youth were also more likely than their German counterparts to believe that opportunities were open to all and that personal agency was important. Evans ascribed these differences to the fact that the school-

to-work pathways were more structured in Germany than in England. This meant that German youth had less scope for personal agency than their English counterparts. As a result, it was easier for a young person in Germany to hold the system at least partially responsible for any failure that occurred. In contrast, the proliferation of choices and de-emphasis on structural constraints in Britain created an environment where young people blamed themselves for failure. Canada and New Zealand are similar to Britain in terms of having less formal links between education and employment than countries such as Germany (Higgins, Vaughan, Phillips, & Dalziel, 2008). As a result, it is likely that young people in Canada and New Zealand would be similar to their British counterparts in blaming themselves if their school-to-work transition did not go well.

The first section of this chapter has outlined six themes that have emerged from the youth transitions literature. Clearly the school-to-work transition is not linear for many young people in western countries, rather it can be unpredictable and non-sequential. The youth transitions literature primarily attributes the capricious nature of young people's career pathways to changes in western society that have made it necessary for them to construct an identity rather than having one bestowed. This need, along with the imperative to gain more education, has provided young people with an opportunity in their late teens and twenties to engage in identity exploration by experimenting with different education and work options. While there appears to be a large developmental component to young people's milling and churning, the youth transitions literature also acknowledges the role that structural forces play in circumscribing the pathways that young people take.

The contingent nature of many young people's career pathways is not congruent with the expectation that the school-to-work transition will be linear in nature. This expectation assumes that young people make well considered career decisions when they graduate from secondary school. In reality, many follow career pathways that they have not chosen in any meaningful way but rather fell into because there was a need to choose a tertiary education programme when they graduated from secondary school. A worrisome trend in the youth transitions literature is the increasing emphasis placed on the personal agency of young people in relation to making an effective school-to-work transition. While personal agency is clearly an important element, its overemphasis can lead to a

decontextualisation of the school-to-work transition and lead young people to blame themselves when their career plans are not realised due to forces beyond their control.

Career Development Theory

This section examines three career development theories: trait and factor, developmental, and chaos-oriented approaches. Each provides a different perspective on the non-linearity and unpredictability of young people's career pathways that has been identified in the youth transitions literature.

Trait and Factor Approaches

The trait and factor approach that has dominated career counselling since Parson's (1909) work a century ago contended that good career decision making was simply a matter of "discovering" a client's traits (interests, values, personality type, and skills)⁸ and matching those to the occupations available through a process of "true reasoning" (Harren, 1979; Sharf, 2009; Tiedeman & O'Hara, 1963). Savickas (1993) writes: "In work-role counselling, we followed Parson's lead in applying the scientific model to fostering career choice. While scientists were objectifying the world, counsellors objectified interests, values, and abilities and used these inventories to guide people to where they fit in organisations" (p. 206).

Findings from the youth transitions studies that have been cited call into question several tenets of traditional approaches to career development and career counselling. Notions of non-linear transitions, bounded agency, and a lack of long-term plans are a far cry from traditional approaches to career planning that reify well explored "rational" long-term career choices. An underlying assumption of traditional models of career counselling is that an individual's sense of self and their environment remains relatively static. The trait

⁸ A related concept is that of work orientation. Work orientation refers to whether a person considers their work to be a job, a career, or a calling (Wrzesniewski, McCauley, Rozin, & Schwartz, 1997). People who view their work as a job are primarily concerned about the wage they are earning, rather than the work itself. Those who view their work as a career value prestige, social status, and the power that comes with advancement in their careers. Individuals who see their work as a calling are less concerned about salary or status and are more interested in finding jobs that are personally meaningful.

and factor approach attempts to fit together moving targets: one, the ever-evolving self, the other, the world of work in a post-industrial age (Mitchell & Krumboltz, 1996; Peavy, 1993). The theory does not take into account the developmental nature of a young person's identity (Arnett, 2000a; Dwyer et al., 2005; Vaughan & Roberts, 2007; Super, 1980, 1990), the host of social and contextual factors that impact on individuals' careers (Hodkinson & Sparkes, 1997; Patton & McMahon, 1999, 2006; Pryor & Bright, 2003a, 2003b; Young, Valach, & Collin, 2002), or the opportunity structure that is available to them (Miller, 1999). Krumboltz (1993) argued that:

The trait-and-factor theory would have us believe that career counselling was a purely cognitive matching process. No feelings. No fears and anxieties. No zentophobia.⁹ No false assumptions. No hopes and aspirations. No family involvement. No status considerations. No racial or gender stereotyping. No religious or community pressure. Just a nice game of occupational scrabble placing the right chips on the best squares to maximise the total score. (p. 146)

Parson's notion of true reasoning has also been questioned. Many participants in the transition studies cited in the previous section used what Bubany, Krieschok, Black, and McKay (2008) refer to as "non-rational methods." Phillips (1997) has argued that rational decision making does not reflect the reality of how most people make decisions. Instead, alternative decision-making models that highlight the role of intuition, emotion, subjectivity, and interdependence are more descriptive of the way decisions are made. Similarly, Krieschok (1998) has contended that rational approaches to decision making can be deleterious because "most processing performed by the human mind for decision making and behaviour initiation is not performed at a conscious level, and that reflection on those decision-making processes is not only futile, but possibly confusing and detrimental to good decisions" (p. 217).

Hartung and Blustein (2002) argue that Parson's notion of true reasoning needs to be expanded to include a more postmodern perspective that "interprets true reasoning to

⁹ Krumboltz uses the term "zentophobia" to refer to the stress, fear, and anxiety associated with planning for the future.

mean different things to different people depending on their world-view, decision-making styles, cultural value orientations, and life circumstances” (p. 43). They advocate that rational and alternative-to-rational choice models are complementary rather than conflictual. This takes into account the findings of Bimrose and Barnes’ (2007) study that young people vary in their decision making processes. While some preferred to make decisions based on a careful weighing of their options, others favoured leaving their options open so that they could take advantage of opportunities that might present themselves.

Despite the extensive criticism of the trait and factor theory, it continues to be the most widely used of the career development theories by career practitioners (see for example, Savickas & Walsh, 1996; Sharf, 2009). One need only look at the websites of most secondary schools and tertiary educational institutions to see that young people are typically told that good career decision making occurs as a result of matching traits (characteristics such as values, interests, skills, and personality styles) with the factors required to perform a particular job successfully. The popularity of this approach amongst practitioners seems to be related to its simplicity and the proliferation of tools that have been developed to employ it (Patton & McMahon, 1999).

Notwithstanding these shortcomings, the trait and factor approach to career planning remains one that can be useful for practitioners, albeit in a secondary rather than primary role (Cochran, 1997; Savickas, 1993).

Developmental Approaches

Over a period of 40 years, Super (1953, 1957, 1980, 1990, 1992) extended previous thinking about career development by presenting a “lifespan” model. Super (1984) considered his theory to be segmental in nature rather than comprehensive or integrated. His theory addressed three broad topics: a) the development of self concept; b) the life stages and developmental tasks required for effective career development; and c) the breadth and richness of what encompasses an individual’s career (Harris-Bowlsbey, 1985).

Super theorised that as individuals traversed their lifespan, they moved through a predictable set of sequential developmental stages: Growth (Birth-14); Exploration (Age 15-24); Establishment (Age 25-44); Maintenance (Age 45-64); and Decline (Age 65 on) (Super, 1957). Super’s theory evolved substantially over time (Salomone, 1996).

McMahon, Patton, and Tatham (2003) hold that Super's original model was suited for the context of the industrial era in which it was developed. It viewed career development as being linear and viewed career as what individuals did in relation to paid employment. While initially presenting the developmental stages as being linear and unidirectional, Super later conceded that many individuals recycle through previous stages of adult career development as a result of planned and unplanned changes (Super, Thompson, & Lindeman, 1988). His initial focus on paid employment expanded to include studying, community service, home and family, and leisure activities. Super also recognised that individuals placed different levels of importance on various roles and introduced the notion of role salience of a particular life role (Super, 1980, 1990).¹⁰ Although Super did not discuss role conflict, others have observed that a high degree of salience for multiple roles can cause role strain, especially when each role demands a substantial time commitment (Duarte, 1995; Duxbury, 2006; Scheck, Kinicki, & Davy, 1997).

In many ways, it appeared that Super presaged the findings of pathways studies such as the Australian Life-Patterns Study and the New Zealand Pathways and Prospects Study. More than fifty years ago, he posited that identity and vocational choice are closely linked. Further, his later work recognised that individuals do not proceed through the developmental stages in a linear, unidirectional fashion, making his work particularly relevant to chaos-oriented approaches to career development that would come later. Super (1990) explains: "The concept of exploration as something completed in mid-adolescence has been shown to be invalid." Salomone (1996), citing Resnikoff (1969), observed that more than any other career theorist, Super has contributed to changing the emphasis in vocational psychology from the trait and factor approach to an understanding of the fundamentally developmental nature of career development.

¹⁰ Hansen (1997) and Schor (2003) have cautioned that an overemphasis on paid employment can cause individuals to neglect other life roles.

Chaos-oriented Approaches

The developmental perspectives found in both the youth transitions and career literature partially explain the unpredictability of young people's career pathways. If career choice and identity development are closely linked, it follows that a young person's choices will change as their identity changes. Given that an individual's identity can change dramatically during the years of emerging adulthood (Arnett, 2004; McAdams, 1993), it is not surprising that young people would find that a career choice made at age 18 is no longer congruent with their identity a few years later. While young people's identities can change both quickly and dramatically, it is not plausible that the large number of changes that many young people make in relation to their education and career pathways can be fully explained only by changes to their identity. Many other external and internal factors have been shown to exert influence (Brown & Lent, 1996; Lent et al., 2000; Patton & McMahon, 1999, 2006). Over the past twenty years, there has been growing recognition in the career development field of the importance of incorporating the role of uncertainty and chance events into the career planning process (Bloch, 2005; Bright & Pryor, 2008; Drodge, 2002; Gelatt, 1989; Mitchell, Levin, & Krumboltz, 1999; Pryor, Amundson, & Bright, 2008; Pryor & Bright, 2003a, 2003b, 2007). This chaos-oriented perspective helps to more fully account for the non-linearity and unpredictability of many young people's career pathways that is evident in the youth transitions literature. A more detailed discussion of the application of chaos and complexity theory to career development will be provided in Chapter Three.

The inclusion of uncertainty in the career planning process is needed as a counter weight to the predominance of the trait and factor approach. This is particularly true in regards to the school-to-work transition. Despite evidence to the contrary, young people and those who support them continue to assume that they should have long-term career plans and that those plans are likely to be realised (Peavy, 2001). According to career theorists like Miller (1995), this belief is supported by the way career professionals continue to practice, promoting a view of career development as a "rational affair, emphasising the need for logical planning and scientific decision making" (p.163).

A belief in lockstep career pathways has led to a number of career myths that cause trouble for young people in the career decision-making process. Lewis and Gilhousen

(1981) outlined a number of these myths including: “My career development involves only one decision,” “I must be absolutely certain before I act,” “My work should satisfy all my needs,” “I can do anything as long as I’m willing to work hard,” and “If I change I have failed” (p. 296). None of these cognitions acknowledge the role of a host of intertwined influences and chance events in the career planning process.

However, like many myths, there is some grounding in reality. There was a period in the middle of the 20th century where many middle-class white men in western countries had career pathways that resembled the ones reified by the career mystique (Moen & Roehling, 2005). However, in a post-industrial age, the certainty embodied in the career mystique often does not apply to those who are privileged let alone to those who are disadvantaged (Moen, 2009). Savickas (2000) writes:

... linear projections of career, no longer seem as useful to postmodern workers who encounter twists and turns, with both good and bad surprises. Accordingly, vocational psychologists must participate in a re-vision and re-interpretation that responds to these cultural changes and the new difficulties that students and workers encounter. (p. 59)

Central to this reconceptualisation is the role uncertainty plays in career planning. Young people may face social sanctions when they are uncertain about their career plans. Those sanctions originate not only from their parents and society-at-large but also from the career counsellors with whom they work. Krumboltz (1992) notes that indecision “is treated almost as a mental disorder by some professional counsellors” (p. 240). Both Krumboltz (1992) and Miller (1995) have made the case that saying “I don’t know” or “I’m not sure” about one’s career path is often a very sensible answer in a complex and unpredictable world.

This embrace of uncertainty acknowledges that unplanned events often exert a powerful impact on people’s career paths (Betsworth & Hansen, 1996; Bright, Pryor, & Harpham, 2005; Hart, Rayner, & Christensen, 1971). In a study of 772 high-school and university students in Australia, Bright et al. (2005) found that 70% of participants identified at least one chance event as having influenced their educational or career path.

Bright et al. argued that: “Given their apparent ubiquity, dismissing chance events as merely error, will continue the tradition of providing accounts of career behaviour so far removed from the actual career development experience of individuals and their counsellors, that such accounts will remain fundamentally irrelevant to both” (p. 573). Betsworth and Hansen (1996) categorised chance events based on a study of 237 older adults in the United States. The categories they identified included: professional or personal connections for obtaining a job; unexpected advancement (firing, death of a peer or superior); right place/right time; influences of marriage and family; encouragement of others; obstacles in original career path; influence of historical events; and unexpected exposure to an interest area. Ironically, unplanned events are so pervasive that, according to Krumboltz and Levin (2004), they should be expected.

While chance events play a significant role in undermining the predictability of career decision making, so too do a host of ecologically intertwined factors. Super’s (1990) later work introduced the concepts of “personal determinants” and “situational determinants” which he contended impacted upon career decision making. Personal determinants included factors such as interests, values, needs, intelligence, and aptitudes while situational determinants included contextual factors like peer group, school, family, community, society, the labour market, and the economy. Patton and McMahon (1999, 2006) expanded the number of internal and external influences in their presentation of a systems-based theory that accounted for the multiple influences on career pathways and included ethnicity, the individual’s exposure to broader social forces related to their socioeconomic status, political culture, and chance events. The multiple influences outlined by Patton and McMahon lend support to chaos-oriented interpretations of career development that contend that the existence of so many factors mean that career decision makers are subject to unpredictability and non-linear change in relation to their career pathways (Pryor & Bright, 2003b).

As this discussion of the three approaches to career planning shows, there has been steady advancement in theory from static trait and factor models, to linear developmental models, and finally innovations that incorporate non-linearity and unpredictability into our understanding of young people's career pathways. The emergence of chaos-oriented approaches to career development in the literature is particularly significant given that it

challenges the dominance of trait and factor approaches to career decision making. Expecting a career decision to be made once and for all burdens young people with unrealistic expectations that cause problems as they navigate the school-to-work transition. As Peavy (2001) explains: “Students have been encouraged to define specific, long term goals for themselves ... The effect of this approach can be to present career decision-making as an ominous, irrevocable decision-making process, which can lead to fears of failure rather than promoting thoughtful and meaningful actions” (p.8).

If we accept that a young person’s career development is indeed subject to chaos, career guidance interventions must account for this. The following section provides a discussion of the literature related to approaches to career guidance that help career decision makers work with the vicissitudes of their career pathways.

Chaos-oriented Approaches to Career Guidance

This section discusses four intervention strategies that have been identified in the literature related to chaos-oriented approaches to career guidance.

Help Career Decision Makers Work with Uncertainty

Bright and Pryor (2005) contend that career counsellors should pay more attention to areas of career decision making that have been neglected “such as chance, unpredictability, the limits of knowledge at the point of decision-making, the limitations of goals and the non-linearity of change” (p. 303). Miller (1995) maintains that “certainty over making career choices should not be the goal of career counselling. The outcome of career counselling should be the recognition that uncertainty is part and parcel of career decisions” (p. 165). This is echoed by Krieshok (2001) who urges practitioners to “allow for less certainty in outcomes, less decidedness, and less surety” (p. 215).

Krumboltz (1992) and Moses (2003) have noted that young people experience a great deal of social pressure to make a career decision. There are a host of problems created for young people when they are asked for or want more certainty than is possible. Incongruity between demands for decisiveness and the realities of adult development in a post-industrial world have contributed to what Krumboltz (1993) refers to as

“zenthophobia,” the fear and anxiety associated with career exploration.¹¹ This anxiety leads young people to procrastinate about making decisions. While young people who are uncertain about their career direction experience discomfort, so too do many youth who readily identify a career direction. Many will declare a career choice in order to relieve the discomfort of not having made a choice.¹² Rather than spending time investigating whether their choice is a good fit, they are so relieved after making a decision that many “push it to the far recesses of the mind so they don’t have to be anxious about it anymore” (Krieshok, 2001, p. 213).

There has been some headway made in recent years in the development of concepts and counselling interventions to help people work with unpredictability and change. Some of the most notable are interventions based on “positive uncertainty” (Gelatt, 1989, 1991; Gelatt & Gelatt, 2003) and “planned happenstance” (Krumboltz & Levin, 2004; Mitchell et al., 1999). Pryor and Bright’s (2003a, 2003b, 2005a, 2007) work on a chaos theory of careers, which emphasises complexity, influence, change, adaptability, uncertainty, and chance events, also fits well with this emerging trend in career counselling.

A study of the efficacy of Pryor and Bright’s approach compared chaos counselling with trait and factor-matching interventions (McKay, Bright, & Pryor, 2005). Participants rated their level of satisfaction and overall career decision making self-efficacy immediately after participating in either trait and factor or chaos-based interventions. Both approaches were equally effective in reducing levels of irrational career thinking. However, when measured for a second time a month after counselling had ended, gains in self-efficacy, decreases in irrational thinking, and satisfaction level were sustained only by those clients who had received chaos counselling. The researchers speculated that the results of chaos-oriented counselling may endure longer because of its focus on process rather than outcomes:

¹¹ Moderate amounts of anxiety can provide motivation for career decision makers to engage in career exploration (Blustein & Phillips, 1988; Vignoli et al., 2005) and to undertake activities necessary to move towards their goals (Fritz, 2003; Sher, 1979).

¹² Young people respond to social pressure in different ways. Some develop what Benson (2003) refers to as resistance skills which allow them to resist negative patterns of behaviour.

Chaos theory does not stress effecting a particular outcome, but, instead it focuses on preparing and equipping people to meet the career development challenges of the 21st century. It is not a solution but a strategy. It is about empowering for the future rather than providing an answer in the present. (p. 110)

Both positive uncertainty and planned happenstance approaches to career development are compatible with a chaos theory of career (Pryor & Bright, 2007). Gelatt (1962) began his career as a leading proponent for rational career planning but later changed his approach, arguing for positive uncertainty (Gelatt, 1989). He stressed that it was not that rational decision making strategies were wrong but that “they are simply no longer sufficient for today’s complex changing world” (p. 252). According to Gelatt (1989), new experiences bring new information that may very well “develop new values, new goals, and new wants” (p. 254). In other words, while an individual is working towards one goal, he or she may very well discover something else that is even more desirable. A young person’s goals may also need to be adjusted when circumstances change (Chen, 2006; Dwyer et al., 2005).

Gelatt (1995) emphasised that the chief benefits of goals are that they give people the motivation to work hard and that the achievement that results from their efforts provides them with more opportunities. The benefits of goal engagement were explicated further in a longitudinal study of non-university-bound German high school students that examined the experiences of those who had set career-related goals and those who had not (Haase, Heckhausen, & Koller, 2008). Researchers found that participants who had higher goal engagement were more likely to read career-related material, talk with their parents, and send out more applications. Goal engagement prior to graduation also increased the likelihood that participants experienced positive effects after graduation such as excitement, interest, and enthusiasm. A limitation of the study was that it did not investigate outcomes for those who did not attain their goals. Lucas, Clark, Georgellis, and Diener (2004) found that the positive affect experienced by people who set goals broke down if their goals were not achieved.

Planned happenstance represents an attempt to adapt to the realities of unpredictability and change (Pryor & Bright, 2006). While chance events have a significant

influence on many people's career paths, this is not to say that career decision makers should passively wait for something to happen (Miller-Tiedeman, 1988). Krumboltz and Levin (2004) emphasise that there is a significant difference between people who wait for chance events to occur and those who actively seek them out: "All too frequently people wait for an opportunity to knock on their door. Waiting doesn't work. We want you to do the knocking" (p. 105).

Wiseman (2003) found that people who considered themselves lucky generated good fortune through four strategies: noticing chance events, listening to their intuition, creating self-fulfilling prophecies through positive expectations, and adopting a resilient attitude that transforms bad luck into good. Similarly, Mitchell et al. (1999) identified the following skills as being important to taking advantage of unplanned events: persistence, exerting effort despite setbacks, flexibility, changing attitudes and circumstances, optimism, viewing new opportunities as possible and attainable, risk-taking, and taking action in the face of uncertain outcomes. The task for career counsellors was to help young people not only notice and make use of chance events but, to a certain extent, create their own luck (Krumboltz & Levin, 2004; Mitchell et al., 1999). Pryor and Bright (2005b) have developed a "Luck Readiness Index" which assesses eight dimensions of an individual's ability to recognise, create, utilise and adapt to opportunities and outcomes related to chance: flexibility, optimism, risk, curiosity, persistence, strategy, efficacy, and luckiness. These characteristics helped career decision makers to cope with and even thrive on uncertainty (Pryor & Bright, 2007).

Bright and Pryor (2008) have introduced the term "shiftwork" to denote changes in career counselling practice that would help career counsellors to "assist their clients to develop the skills of adaptation and resilience required to negotiate and use productively the fluctuating fortunes of their careers" (p. 64). The most notable of the shifts they advocated is the integration of both order and chance, and stability and change, into career decision making (Pryor et al., 2008). Central to their approach was the utilisation of convergent and emergent perspectives related to career decision making. A convergent perspective focussed on seeking probable outcomes by identifying a few promising options. The generation of these options occurred through the rational decision making process advocated by trait and factor approaches to career planning including using standardised

assessments, gathering information about occupations, and weighing one's options carefully prior to making a decision. In contrast, an emergent perspective on career decision making focussed on exploring possibilities (Pryor et al., 2008). This approach encouraged career decision makers to use creativity and intuition to look beyond probable outcomes to create new options through processes such as taking risks, learning from failure, pursuing passions, listening to their intuitive self, and following their curiosity. The convergent and emergent perspectives were viewed as complementary ways of understanding career decision making rather than being mutually exclusive of one another. Pryor et al. (2008) noted that counsellors may want to use one or both perspectives with career decision makers, depending on the issues presented.

Similar to Gellat's concept of positive uncertainty, Bright and Pryor (2008) propose another shift which emphasises that it is important for career counsellors to help individuals redevelop and abandon their career plans when circumstances require them to do so. Bright and Pryor also recommend that career counsellors change their emphasis on narrowing down options to one in which they encourage clients to think about the advantages of being open to new and yet undiscovered options. A further shift Bright and Pryor advocate is the need for career counsellors to relinquish their tendency to encourage clients to identify a career destination in favour of living with the emergence of their career pathway.

A number of counselling techniques have been advanced in the literature to assist career decision makers to cope with the cognitive and affective challenges of working with uncertainty. Drodge (2002) emphasises the importance of counsellors normalising the uncertainty of career pathways by engaging with career decision makers in discussions about the natural, widespread state of uncertainty in human affairs (Drodge, 2002). Bright and Pryor (2005) have designed a series of exercises that help young people examine the role of chance events and non-linearity, both in their lives and the lives of others. Pryor et al. (2008) recommend an exercise they refer to as "Wotif" that encourages people who are considering a particular vocational option to engage in contingency planning. The exercise asks clients to generate a list of possible chance events that might impact on their career goal and to think about how each of these chance events might change their original goal. In turn, they are asked to consider what alternative options they might pursue if

circumstances make their original career plan unfeasible. The hope is that such exercises will help young people see the “certainty of uncertainty” (Drodge, 2002). The efficacy of this approach was demonstrated in a study that found that showing university students videotapes of two recent graduates who discussed the vagaries of their career pathways during their late adolescence and early adult years had a positive impact on career decision making self-efficacy and career exploration behaviours (Davey, Bright, Pryor, & Levin, 2005).

Along with normalising uncertainty, it is important that young people recognise their reactions to unpredictability and change. Most will find this reality quite anxiety provoking (Bloch, 2005). Traditionally, career counselling has not dealt with the emotional component of career decision making (Kidd, 1998). There have been calls to raise the emotional self-awareness of career decision makers through the utilisation of tools such as journaling that would assist them to recognise and label their emotional experiences and to identify their patterns of dealing with anxiety (Di Fabio & Palazzeschi, 2009; Emmerling & Cherniss, 2003).

Jacobs and Blustein (2008) suggest that the development of mindfulness-based coping skills such as those advocated by Kabatt-Zinn (1990) can help people facing uncertain employment conditions cope with the anxiety that often accompanies a fluctuating labour market. By extension, it would seem that mindfulness practices may have some benefit to young people during the school-to-work transition. The three key elements of mindfulness are awareness, being in the present moment, and acceptance (Germer, 2005). Awareness relates to the ability to be conscious of one’s thoughts and feelings, while at the same time not allowing one’s actions to be ruled by them. Being in the present moment refers to having the capacity to focus on what is occurring in the present, rather than worrying about the past or future. Acceptance is an acknowledgement of the way things are at a given time. Although mindfulness is a concept that is most closely associated with Buddhism, it does not need to be associated with a religious tradition in order to be effective (Kabatt-Zinn, 2003). Jacobs and Blustein contend that individuals who are able to employ mindfulness “are able to make calmer and perhaps more informed decisions for themselves, create a sense of agency about their situations, and operate in a more centered mode of functioning” (p. 174). The mindfulness that results

from regular meditation seems particularly well suited to helping people work with uncertainty in the long term (Quillian-Wolever & Wolever, 2003).

Others have suggested that career counsellors should help young people develop a mindset that embraces change. According to Hiebert (2005), many career professionals in Canada advocate the “High Five Messages of Career Development” (Redekopp, Day, & Robb, 1995) as a way of helping young people engage in career planning in a context of uncertainty. The High Five Messages are as follows:

- Change is constant: expect that things will change.
- Focus on the journey: concentrate on the next career-related step rather than a final destination.
- Access your allies: find people who can help you work towards a career pathway that is of interest.
- Follow your heart: engage in activities that are of interest.
- Stay learning: continue your education through both formal and informal means.

These messages can help alleviate the intense pressure young people feel when faced with the question “What do I want to do?” and reduce the pressure career professionals sometimes experience to provide a ready made answer (Redekopp et al., 1995).

Assist Career Decision Makers to Find a Direction

Bright and Pryor (2008) have emphasised that the unpredictable nature of career development does not mean that structured approaches to career planning should be abandoned, nor does it encourage trusting the career development process to luck. Finding a good fit between a person and their immediate plans is viewed as a good short-term strategy by chaos theorists (Drodge, 2002).

Riverin-Simard (1998) has maintained that vocational personality (interests, values, and preferences) provides “hidden order” to what she has referred to as “vocational chaos.” In a longitudinal study of 1000 Canadian adults, Riverin-Simard found that, although many

had confused and disordered paths, their vocational personalities remained relatively stable over time. The stability of vocational interests in adults is well established in the literature (Savickas & Spokane, 1999). Several studies have found that vocational interests over time as represented by Holland's (1973, 1997) RIASEC model¹³ changed little between late adolescence and middle adulthood for most (Low, Yoon, Roberts, & Rounds, 2005). According to Rottinghaus, Coon, Gaffey, and Zytowski (2007): "vocational interests are tenacious and have far-reaching effects over decades" (p. 20).¹⁴ These findings would seem to be anathema to numerous studies that indicate that late adolescence and early adulthood is a time of identity exploration. It may be that, as Riverin-Simard (1999) pointed out, there are "limits of flexibility" in relation to one's identities. That is, an individual's identities may change over time but generally not in dramatic ways. For example, someone who is social in terms of the RIASEC model will likely always enjoy working with people. However, the particular way in which they want to interact with people may change as their identity evolves.

Carpenter (2008) has advocated an approach that uses the tools of a trait and factor approach in a way that is congruent with a chaos-oriented approach to career development. She has recommended that young people identify areas of interest they want to explore, and skills they want to develop, using assessment tools employed by trait and factor career practitioners. However, Carpenter has counselled that young people use this self knowledge to find a broad sense of direction rather than trying to develop a long-term specific career plan.¹⁵ Carpenter found in her work with young adults that those who made a first choice

¹³ Holland's interest-based theory is organised with six vocational personality types and six parallel work environments: Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), and Conventional (C) — collectively referred to as RIASEC.

¹⁴ Although interests and abilities are often linked, Chang (2000) has emphasised that an individual can be interested in a particular career field without having the ability required to be successful in that field. Similarly, it is possible for someone to have the ability to do well in an occupation without having any interest.

¹⁵ While effective career decision making is facilitated by an understanding of one's vocational personality, Galassi, Crace, Martin, James, and Wallace (1992) found in a study of 92 university students that only 26% of them wanted to engage in self exploration as part of the career counselling process. The majority preferred to explore and make decisions

after graduating from secondary school that fit at least somewhat with their interests and abilities were at an advantage. Choices that were a good fit not only provided motivation for their studies and training but also a sense of satisfaction and competence. Carpenter's point is echoed by Shanahan, Hofer, and Miech (2003), who asserted that a young person's plans were most useful when they accurately reflected their interests, values, and talents.

The value of self knowledge was also observed in the New Zealand Pathways and Prospects study (Vaughan et al., 2006). The researchers observed a group of research participants that they referred to as "passion honers" who were pursuing pathways that were of interest to them. These youth seemed to have developed a list of criteria that were helping them effectively sift career advice and information. It is likely that these criteria were, at least partially, shorthand for their vocational personality types. Having a set of criteria, particularly one that relates to vocational personality, lessens the chances that young people will become overwhelmed by the choices that are available to them (Schwartz, 2004). Schwartz contrasted the behaviour of "choosers" who had reference points for decision making with "pickers" who selected from whatever was readily available, often without considering whether or not their choices were a good fit.

Both quantitative and qualitative assessments that can assist career decision makers find a direction have been identified in the literature. Some of the most frequently used quantitative career assessment tools in North America are the Strong Interest Inventory (Strong, Hansen, & Campbell, 1994) and the Myers-Briggs Type Indicator (Myers, 1987). Qualitative career assessments, or what are sometimes referred to as informal career assessments, have become more common in recent years. Such assessments mark a significant departure from the positivist roots of trait and factor approaches which attempt to objectively assess individuals' traits (McMahon et al., 2003). In qualitative assessments, the individual serves as the reference point in identifying significant experiences and interpreting their career related preferences (Goldman, 1990). Qualitative assessments provide a structured approach to identifying career-related patterns and themes in a young person's life.

about specific careers. Moreover, the research participants stated that the counsellor activities that they most preferred were those of giving advice, opinions, and answers.

A number of techniques have been developed to help people qualitatively identify patterns in their lives including the following: CareerScope for secondary school students (Amundson, Poehnell, & Pattern, 2005), narratives (Cochran, 1997), career-o-grams (Thorngren & Feit, 2001), career genograms (Chope, 2005; Okiishi, 1987), archetypal plots (Pryor & Bright, 2008), My Systems of Career Influence (Watson & McMahon, 2006), and the Pattern Identification Exercise (Amundson, 2003a). Qualitative assessments are particularly helpful in assisting young people with what has been referred to as “knowing why” (Arthur, Claman, & DeFillippi, 1995; Carpenter, 2008), that is, having a sense of why particular jobs or activities are a good fit for them and others are not. Carpenter (2008) has pointed out that the results of career assessments are of little value if they do not promote self-discovery. Simply being provided with a list of occupations is not helpful unless a young person is able to connect the results with their evolving vocational personality.

Savickas (2000) observed that there is often a fictitious dichotomy between practitioners who favour quantitative career assessments and those who find qualitative methods more meaningful. Counsellors can help individuals derive personal meaning from the results of quantitative career assessments which further enhance self understanding (Borgen, 1999). Quantitative assessment can reinforce patterns that have been identified through qualitative means and sometimes identify new ones. Church (2001) has advocated for an integrative approach that involves both qualitative and quantitative assessment techniques.

Krieshok (2001) stressed that it is essential for individuals who have found a starting point to continue seeking information and new experiences to see if the direction they have chosen fits or continues to fit their emerging identity. Chaos-oriented approaches have also recommended that career decision makers stay open to their career direction changing in response to the multiple external factors that are beyond their control (Pryor & Bright, 2007).

Focus on the Development of Career Management Skills

The OECD (2004b) has recommended that career guidance programmes in schools focus on helping young people acquire career management skills. Poehnell and Amundson (2002) have observed that the term “management” may be problematic when applied to

careers because it implies a degree of control over career development that is unrealistic. Good career management theory must account for the limited degree to which young people have control over their education and career pathways (Drodge, 2002; Neault, 2002). This corresponds with Collin's and Watt's (1996) and Peavy's (1996) contention that individuals need help in managing their career development in light of the uncertainties and ambiguities that will likely permeate their journey. Career management has been described as a "process where individuals are active in responding and adapting to change and in creating, constructing, designing, and identifying paid employment opportunities, life, and learning experiences that will enable them to create satisfying lives" (McMahon et al., 2003, p. 4).

Many have offered opinions about the career management skills that are needed to manage the non-linear nature of career pathways in post-industrial economies. According to Dwyer et al. (2005), a readiness to adjust to new circumstances and to change direction is becoming a standard survival strategy. Fouad and Bynner (2008) identify self-awareness and adaptability as "critical meta-competencies" for young people to have in order to manage their careers effectively. Hall and Mirvis (1995) include identity growth (the ability to self-reflect, to continue assessing and learning about one's self, and to change behaviours and attitudes) as a meta-competency. Wijers and Meijers (1996) argue that young people need to develop "actor competencies" and learn to perform three tasks: (a) to form an identity; (b) to determine a direction; and (c) to plan a career and steer themselves along it. Savickas (1999) suggests that in preparing for the rapid changes that are becoming the norm within western societies, individuals need to constantly "look ahead" and "look around." Blustein (1997) asserts that young people need to develop exploratory attitudes and skills that facilitate lifelong exploration. Barnett (2004) maintains that "learning for an unknown future" is crucial.

Career management skills appear to be related to the cultivation of what has been referred to as "career resilience" (Bridges, 1995; Mirvis & Hall, 1994; Waterman, Waterman, & Collard, 1994). Career resilience shares many similarities with its older psychological sibling "resilience," which has focussed on the capacity of individuals to overcome adversity (see for example, Ungar, 2004; Werner & Smith, 2001). Career resilience was first introduced as a concept during the 1980s as workers weathered

downsizing and restructuring. London and Noe (1997) defined career resilience as “the ability to adapt to changing circumstances, even when the circumstances are discouraging or disruptive” (p. 62). Likewise, Bridges (1995) emphasised the importance of career resilience when change is impending:

What you will need ... is the ability to bend and not break, to let go readily of the outdated and learn the new, to bounce back quickly from disappointment, to live with high levels of uncertainty, and to find your security from within rather than from outside. (p. 57)

London (1983) conceptualised career resilience as an individual’s ability to deal with career disruptions in less than optimal environments. It included the ability to: (1) adapt to changing circumstances; (2) be proactive about job and organisational change; (3) be comfortable working with new and different people; (4) have self-confidence; and (5) be willing to take risks. Koonce (1995) emphasised the need for individuals to tolerate and manage ambiguity and to have relatively little need for control. Gelatt (1993) referred to this as “flexpertise,” that is, the ability to work with ambiguity, remain open-minded, and most of all, be able to change one’s mind and subsequent course of action. Percy (2000) advised individuals to “self disrupt” when needed. Percy used a helpful analogy when he suggested that a young person’s education and career pathway should be viewed as Lego blocks that are meant to be put together and taken apart rather than glued. A similar construct to career resilience is what Savickas (1997) called “career adaptability”. He defined it as “the readiness to cope with the predictable tasks of preparing for and participating in the work role and with the unpredictable adjustments prompted by changes in work and working conditions” (p. 254).

Jarvis (2003) has argued that young people need to learn career management skills in the same way that they learn mathematics, science, communications, or technical skills. In recognition of this, a group of Canadian career development experts have developed the “Blueprint for Life/Work Designs” which provides a developmental career management skills framework (Haché, Redekopp, & Jarvis, 2000). The Blueprint identifies core career

management competencies with associated performance indicators for each and can be used as the basis upon which to design career development programmes.

The three competency areas identified in the Blueprint for Life/Work Designs are personal management, learning and work exploration, and life/work building. Each of the competencies has a number of performance indicators grouped into four levels (elementary school, junior high school, high school, and adulthood).¹⁶ The performance indicators detail the specific knowledge, skills, and attitudes that individuals should master at each level to effectively manage their lifelong career building tasks (Haché et al., 2000). McMahon et al. (2003) note that these competencies represent the life/career management skills that individuals need to prepare “to transition repeatedly between work, learning, and other life roles in order to create a life/career that is both satisfying and productive” (p. 5). A revised version of the Blueprint has been piloted extensively in Australia and has proved to be a useful framework for integrating career management competencies across the school curriculum (Ministerial Council for Employment, Education, Training, and Youth Affairs [MCCEETYA], 2007).

While it is important to work with young people in relation to helping them develop career management skills, the literature also points to the need for governments to support the provision of lifelong career guidance services (Watts, 2005, 2008; Watts, Hawthorn, Hoffbrand, Jackson, & Spurling, 1997). Lifelong career guidance refers “to a range of activities that enables citizens of any age and at any point in their lives (lifelong) to identify their capacities, competencies and interests, to make meaningful educational, training and occupational decisions” (European Centre for the Development of Vocational Training, 2005, p. 11). The notion of lifelong guidance is important in relation to the non-linear nature of most young people’s transition from school to work because it implies that they will have access to career guidance services whether they are in tertiary education, in a job,

¹⁶ In the Canadian school system, children generally enter elementary school at the age of five and leave at the age of 11 after completing grade six. They then proceed to junior high school for grades seven to nine. High school extends from grade ten to twelve.

or are unemployed. This is clearly not the case in many OECD countries including Canada (OECD, 2004a).¹⁷

There has been a call for career guidance programmes to work with parents in relation to their children's career development given the substantial influences they have on their children's career decision making (Helwig, 2008; Looker & Lowe, 2001; Middleton & Loughhead 1993; Sebald, 1989). Parents may be more supportive of their children's career pathways if they are aware that milling and churning is normal and that their children will need their support throughout this process. As Vaughan (2003) emphasises, rather than trying to eradicate milling and churning we should allow them to "try things out, make mistakes, and change their minds" by "supporting them through the confusing times and the changes of heart" (p. 9).

Encourage the Use of Experience-based Approaches

There have been calls for career guidance programmes to reduce the emphasis on information-driven approaches to helping young people make education and career choices in favour of providing more opportunities for direct work and tertiary education experience (Foskett, Dyke, & Maringe, 2004; Grubb, 2002). Career guidance programmes are greatly enriched when they include opportunities for students to engage in experiential learning such as course tasters, and active experiences of the world of work through visits, simulations, shadowing, and actual work experience (Bell & Bezanson, 2006; OECD, 2004a; Watts & Sultana, 2004). It is through such experiences that they gather more information about their interests and abilities and, just as importantly, what they do not want to do (Arnett, 2004). As well, exposure to a wide variety of work and education settings provides an opportunity to gather information that may help inform further action (Bright & Pryor, 2008). Ibarra (2003) contends that activities that help people broaden their

¹⁷ There are examples of lifelong guidance services in some OECD countries. The OECD (2004 a) has cited the career guidance services in Wales as an exemplar of such services. In Wales, seven regional career companies offer a one-stop shop of services to people of all ages. The companies also provide support to career guidance services that are embedded in schools and universities. Similar types of services have been developed both in Scotland (Howieson & Semple, 2006) and New Zealand (Watts, 2008).

experiences are far more effective in facilitating career development than those that solely focus on making plans for the future.

Boyd, McDowall, and Ferral (2006) found that having the opportunity to have a first-hand experience with work and tertiary programmes was the form of transition support that an at-risk group of young people in New Zealand found the most beneficial. The hands-on experience was valued because it allowed them to explore their likes and dislikes, find a match between their interests and career pathways, and find out more about the worlds of work and tertiary study. Similarly, a study that was conducted on the efficacy of cooperative education programmes¹⁸ in the Canadian province of New Brunswick found that close to 70% of tertiary students who took part in a cooperative education programme said that their work placements helped them identify their future career direction (Canadian Council on Learning, 2008). Many of these first-hand experiences with the world of work connected students with new people whom they could draw upon for information, advice, and, in some cases, future employment. This exposure helped them develop what Ball and Vincent (1998) have referred to as “hot knowledge” about occupations. These experiences also provided opportunities for young people to experience success, gain confidence, develop vocational and social skills, and gain qualifications. A Canadian study found that students in their last year of secondary school wanted more opportunities to participate in work experience programmes than were available to them (Witko, Bernes, Magnusson, & Bardick, 2005).

Engaging in experiences outside of the education system has also been identified as a way of facilitating career development. Inkson and Myers (2003) found that young New Zealanders who embarked on extended overseas working holidays were serendipitously provided with “unique and precious career development” (p. 171). Having a series of varied and casual jobs not only abroad but at home might be quite useful in preparing young people for the realities of the new economy because they assist with the development of flexibility, multiple skills, self-confidence, and enterprise which are the

¹⁸ Cooperative education is a structured method of combining classroom-based education with practical work experience. A cooperative education experience provides academic credit for a structured work experience.

characteristics that are increasingly becoming necessary for survival and prosperity (Arthur, Inkson, & Pringle, 1999). Volunteering is another valuable way for young people to gain skills and create career development opportunities. A Canadian survey found that many young people between the ages of 15-24 reported developing a range of skills through volunteering, including interpersonal, communication, and organisational and managerial skills (Ekos Research Associate & Canadian Policy Research Network, 1999). Twenty-four percent of those surveyed indicated that their volunteer work helped them to secure employment.

There has been some discussion in the literature of utilising role plays, case studies, games, and drama as a way of helping young people to experience various scenarios related to future potential employment and educational opportunities. Foskett et al. (2004) recommended that more resources be allocated to less traditional forms of career guidance such as drama, theatre, and interactive web site support. An intensive role game called “The Real Game” developed in Canada assists students in experimenting with life planning, choice, and challenges. According to Jarvis (2002), young people who participated in the game were more motivated to seek out traditional career and labour market information. Case-study approaches that were loosely based on the experiences of real young people who were in the midst of the school-to-work transition have also been successfully used with groups of 16 to 21-year-olds (Shepard & Shoop, 2003). The case-studies helped students to develop new perspectives on their own situations, identify strengths and supports, and construct action plans. A programme in Britain found that students identified with the characters in a drama production that depicted different students at various stages of decision making (Fosket et al., 2004).

Many educational institutions are becoming more active in supporting students’ career exposure undertakings such as work experience, co-op terms, skills competitions, service learning projects, and credit for volunteer work (Herr, Cramer, & Niles, 2004). However, most do not include the opportunity to reflect on what their experiences taught them about the type of work they would like to do (Meinhard & Foster, 1999). It is important that young people are invited to share and reflect both on first-hand and vicarious career related learning experiences (Bell & Bezanson, 2006; Dyke et al., 2005). A basic tenet of experiential learning is that learning is greatly enhanced when the provision of

experiences are complemented by reflection (Kolb, 1984). A promising development in this regard is the increasing use of portfolios¹⁹ as career planning tools (CCDF, 2003).

This section has outlined four themes in the literature related to chaos-oriented approaches to career guidance. The themes included helping career decision makers work with uncertainty, assisting them to find a direction, focussing on the development of career management skills, and utilising experience-based approaches. These strategies are instructive for parents, career advisors, and policy makers as they consider ways to help young people make positive career-related transitions after graduating from secondary school.

Conclusion

This chapter has considered a broad range of literature relating to the experiences of young people in relation to the school-to-work transition. It has discussed six themes that have been delineated from the youth transitions literature. These themes highlight both the contingent nature of young people's career plans and the unrealistic expectations that both they and others have of the way that the school-to-work transition will occur. The central role that identity exploration plays in the school-to-work transition is emphasised in the youth transitions literature. In particular, Arnett's (2000a, 2004) work on emerging adulthood has received a great deal of attention in recent years.

Given what is known about youth transitions in modern times, and advances in the theory of career planning, a new way to conceptualise career paths is needed; one that is less deterministic. While trait and factor theory was a modernist response to career paths during a time of economic growth and perceived certainty, and developmental theories acknowledged changing conceptions of young people as emerging adults into their twenties, chaos-oriented approaches to career development help us both understand and normalise the discontinuities in people's career paths in western post-industrial societies.

¹⁹ A career portfolio is a collection of documents, artefacts or materials which are representative of an individual's academic, leisure and career development activities (Morrissey et al., 2008). A career portfolio is both a process and a product. As a process, it requires individuals to identify and reflect on what interests and motivates them. As a product, it documents evidence of an individual's work and learning history, skills, interests, abilities, and feedback from others.

Both developmental and chaos-oriented approaches to career development stress the importance of helping young people develop career management skills that will give them the tools to cope with changeable career pathways. Chaos-oriented approaches take this notion one step further by advocating for approaches that help young people work with both the cognitive and affective dimensions of uncertain career pathways.

Given the increasing prominence of contingency, uncertainty, and change in contemporary theoretical developments in career development, the next chapter will discuss the genesis of chaos and complexity theory and its application to career development.

Chapter Three Chaos and Complexity Theory

Introduction

This chapter begins by providing a rationale for using chaos and complexity theory as the central conceptual lens for the present study. Following this, an overview of chaos and complexity theory and an explanation of its historical roots are provided. In order to contextualise chaos and complexity theory, an account of the rise of scientific determinism and the more recent challenges to the dominance of the paradigm are given. Discussion then moves to an explanation of four tenets of chaos and complexity theory that have particular relevance to the career development field and to ways in which chaos and complexity theory has been applied to the career development field. A number of applications of the theory to other social science fields that could potentially inform the career development field are also considered. The chapter concludes with a critique of the way in which chaos and complexity theory has been applied to the career development field.

Rationale for Choosing Chaos and Complexity Theory

Like most career counsellors, I began my vocation by using traditional approaches to counselling that sought to assist people in making long-term career plans that fit well with their interests and abilities. However, it soon became apparent that most of my clients' education and career pathways were turbulent and unpredictable. In many ways, I should not have been surprised given the score of individual, family, and socio-economic factors that are at play as an individual's career pathway unfolds (Patton & McMahon, 1999). What was intriguing, however, was the large role that seemingly innocuous unplanned events had on many people's pathways. For example, one client told me that her decision to pursue a career in the nursing field occurred after a ten-minute conversation with a nurse who happened to sit down next to her in a coffee shop.

I also noticed in my work with young adults that turbulence and unpredictability seemed to be particularly pronounced in the decade after graduation from secondary school. However, by the time they were in their late twenties, many who experienced

disorder in the immediate years after secondary school seemed to find a career pathway that was more or less suitable. The dynamics that I observed in my clinical work were borne out in many of the interviews conducted for this study and in other youth transitions studies (Arnett, 2000a, 2004; Dwyer et al., 2005; Vaughan et al., 2006). Recent developments in the career development literature corroborate these findings. Of particular interest is the application of chaos and complexity theory to career development that argues that unpredictability and non-linear change are inherent in individuals' careers (Pryor & Bright, 2003a, 2003b, 2007).

As I delved into the literature, it became obvious that there was a gap. While the youth transitions literature indicates that the decade after secondary school graduation is chaotic for many young adults, chaos and complexity theory has not been explicitly applied to explain this process. Briggs and Peat (1999) have pointed out that the application of chaos and complexity theory helps to raise novel questions. For example, some of the questions that it raises for the school-to-work transition are:

- How is it that some young people appear to follow very ordered pathways?
- What benefits, if any, accrue to young people whose education and career pathways appear to be ambiguous?
- What helps to bring order to young people's pathways?
- What is the middle ground between too little and too much order in a young person's career pathway?

Answers to such questions have the potential to address the question posed by the present study about how young people construct their careers and what these findings mean for the ways that parents, career advisors, and policy makers can assist young people in making positive career-related transitions after graduating from secondary school.

Chaos and Complexity Theory

According to Bütz (1997), the study of non-linear systems was referred to as chaos theory because the behaviour of such systems appeared to be chaotic to the scientists who initially studied them. Chaos is commonly understood to mean "confusion" or "disorder"

(see for example, Oxford American Dictionary [McKean, 2006]). Chaos and complexity theory was developed to help understand the behaviour of highly complex systems (Kellert, 1993; Wheatley, 1999). A system that is complex has a great number of factors which interact in idiosyncratic ways. Central to chaos and complexity theory is the idea that beneath the apparently chaotic behaviour of complex systems lay patterns that make it possible to both understand and influence the behaviour of the system (Briggs & Peat, 1989; Capra, 1996; Gleick, 1987; Stewart, 1989).

The term “complexity theory” appears to be frequently used interchangeably with “chaos theory” (Bolland & Atherton, 1999). However, some view complexity theory as an extension of chaos theory that is distinct (Holland, 1996; Lewin, 1999). One of the principal assumptions of complexity theory is that living systems teeter at the edge of chaos as a way of generating enough diversity to adapt to environmental demands in new ways (Bütz, 1997; Lewin, 1999).

Historical Roots

The insights of chaos and complexity theory have a great deal in common with many of the world’s oldest indigenous and spiritual traditions. Chaos played a central role in the Babylonian, Egyptian, Greek, and traditional Native-American creation myths that viewed it as necessary for the creation of new forms of life (Briggs & Peat, 1999; Bütz, 1995). In more recent times, the disorder that is associated with chaos has taken on negative connotations. Bütz (1997) tells us that Christianity played a role in estranging its adherents from an appreciation of chaos:

The spread of Christianity in Europe and elsewhere seems to be largely responsible for the pervasive rationalistic attitude of the West in contemporary society, where chaos is bad and order is good, where the rational, linear things of the world have been equated to good and the irrational, non-linear world has been equated to bad in every sense of the word. (p. 212)

This vilification of chaos facilitated the development of a mechanistic worldview that emanated from Newton’s and Descartes’s work (Bütz, 1995). Their work gave rise to

scientific determinism which assumed that everything that happened had a definite cause and gave rise to a particular effect (Capra, 1996). In principle, this meant that the future of any system could be predicted with absolute certainty if all of the details of its state were known. Laplace, an 18th century French philosopher-mathematician, was one of the foremost supporters of scientific determinism. He is quoted as saying that: “given the position and velocity of every particle in the universe, [I] could predict the future for the rest of time” (cited in Zimmerman, 1989, p.54).

The idea that an understanding of present conditions allowed one to determine conditions at all other times has been a central tenet of science ever since Laplace's time (Hawking, 2005). Gleick (1987) points out that scientists who adhered to a Newtonian view of the world worked under the assumption that their inability to make accurate measurements was largely inconsequential. An approximate knowledge of a system's initial conditions combined with an understanding of natural laws meant that it was possible to approximate the behaviour of a system. From this perspective, small influences could largely be ignored. As a result, physical, biological, and social scientists tended to ignore findings that did not fit into linear explanations and explained them away as “bad data” (Bütz, 1997), “outliers” (Sardar & Abrams, 2004), or “noise” (Wheatley, 1999).

Over time, scientific inquiry itself began to provide alternative ways of understanding phenomena than that provided by scientific determinism. Henri Poincaré, a French physicist and mathematician, was the first to provide a mathematical description of chaotic behaviour in a dynamical system when he showed that the three-body problem of gravitation was unsolvable (Barrow-Green, 1997). The three-body problem relates to the unpredictability that occurs in a celestial body's orbit when the gravitational pull of a third body is introduced. When there are two celestial bodies, Newton's mathematical laws of gravity accurately describe their path. However, it is no longer possible to predict the long-term path of an orbiting moon with certainty in a three-body system because gravity is a non-linear force that exerts its force on the other two in unpredictable ways (Sardar & Abrams, 2004). Bütz (1997) writes that even though his work was neglected for decades, ultimately, “Poincaré unhinged the notion of a predictable and ordered universe that had prevailed since the late 1600s” (p. 6).

Scientific determinism was further questioned by the German physicist Heisenberg's contribution of the Uncertainty Principle to quantum physics. This principle states that it is not possible to accurately measure the position and momentum of a sub-atomic particle. The more accurately one tries to measure the position of the particle, the less accurately one can know the speed, and vice versa (Hawking, 2005). This means that while it is possible to predict a range of possibilities for the future motions of a particle, it is impossible to be precise. Hawking (2005) argues that scientific determinism was subverted by Heisenberg's Uncertainty Principle. If it is not possible to accurately determine the coordinates of a system, then predicting its future behaviour accurately is impossible. A metaphorical application of Heisenberg's Uncertainty Principle has led some to question determinism in relation to the social sciences (Zimmerman, 1989).

Edward Lorenz is considered by many to be the father of modern day chaos theory (Bütz, 1997; Gleick, 1987). Interestingly, Lorenz stumbled on non-linear phenomena while conducting research that related directly to a scientific deterministic worldview. He, like many weather scientists in the 1950s and 1960s, was optimistic that climatologists could move beyond weather forecasting to weather prediction. With the advent of computers, it was believed that if enough data was collected and collated that it would be possible to accurately forecast the weather well into the future.

Gleick (1987) recounts the story of Lorenz's accidental discovery of chaos that occurred in 1961. Lorenz was testing a simple model of weather prediction using three kinds of data—wind speed, air pressure, and temperature. The data was entered into three equations that were coupled in such a way that the results from one equation were entered into the others as raw data and then the process was repeated creating a feedback loop. Lorenz was working with a computer with limited memory, and after viewing a particular pattern he decided to rerun the data. He restarted the programme, this time rounding the values off to three places instead of the original six. Lorenz assumed that the new simulation would exactly duplicate the old but was astounded to find that the two weather trajectories quickly diverged. A small discrepancy in the initial number, less than 0.1 percent, completely changed the result. When the results of the computations were iterated as raw data for the next calculation, the small initial differences were quickly amplified through a feedback loop into a large one. From Lorenz's work it became evident that in

chaotic systems a small difference in initial conditions, inputs, or variables can lead to very different outcomes. This meant that weather forecasts beyond two or three days were speculative, and that long range forecasts beyond six or seven were worthless (Gleick, 1987). Lorenz's work has "consistently been described as the gateway back to Poincaré's work and the door through which our current notion about chaos theory emerged" (Bütz, 1997, p. 6).

James Yorke, a mathematician, has been credited with discovering Lorenz's work and giving the science of chaos its name (Gleick, 1987; Sardar & Abrams, 2004). According to Gleick, Yorke believed that physicists had been taught not to see chaos. Non-linear systems that exhibited chaotic behaviour were rarely taught. When physicists encountered systems that acted in chaotic ways, their training encouraged them to dismiss them as aberrations. Yorke maintained that orderly solvable linear systems were the aberration. His much quoted paper "Period Three Implies Chaos" (Li & Yorke, 1975) written with one of his students introduced the term "chaos" to the scientific community (Sardar & Abrams, 2004).

During the past three decades, a group of physical, biological, and social scientists have examined the application of chaos and complexity theory to their fields. According to Sardar & Abrams (2004), it has had an impact on most fields of study including mathematics, physics, astronomy, meteorology, biology, chemistry, medicine, economics, engineering, psychology, linguistics, and history. Bütz (1997) contends that modern chaos and complexity theory amounts to a reintroduction of chaos in a form that is more palatable to the Euro-Christian mind because it "comes neatly wrapped in a nice rational scientific package" (p.214).

Tenets of Chaos and Complexity Theory

There are a host of characteristics that have been attributed to chaotic systems. The following section describes four tenets of chaos and complexity theory that appear to be most relevant to this study.

Non-linear Change

Changes in complex dynamic systems can occur in either a linear or non-linear fashion. Linear change happens when a change in one variable is directly proportional to the alteration in another. Systems undergoing linear change can be graphed on a straight line which means that it is possible to predict with accuracy what will occur next (Sardar & Abrams, 2004). Briggs and Peat (1999) offer the example of a car accelerator. When one slowly presses on a car's accelerator, the car gently speeds up. A small effect produces a small change. It is this type of change that is typically described by conventional science.

In contrast, change in a chaotic system occurs in non-proportional ways so that there is not a direct relationship between cause and effect. Change is often abrupt, unexpected, and difficult to predict. Non-linear relationships are common both in natural and social systems (Kincanon & Powel, 1995; Stewart, 1989). Examples of non-linear systems include the weather, the spread of epidemics, the rise and fall of civilisations, and stock market behaviour (Sardar & Abrams, 2004).

Sensitive Dependence on Initial Conditions

Systems that exhibit sensitive dependence on initial conditions can produce markedly different behaviour even though their initial states were very similar (Kellert, 1993). Sensitivity to initial conditions has been referred to as the “signature of chaos” (Sardar & Abrams, 2004, p. 26). It is this characteristic that makes chaotic systems prone to non-linear change. Lorenz (1993) famously dubbed a chaotic system's sensitivity to initial conditions as the “butterfly effect.” This term came from a presentation that he made in 1972 entitled *Predictability: Does the Flap of a Butterfly's Wings in Brazil set off a Tornado in Texas?* In his presentation, he speculated that the flapping of a butterfly's wings represented a small change in the initial condition of the system, which might cause a chain of events leading to large-scale weather phenomena such as a tornado (Lorenz, 2000). Had the butterfly not flapped its wings, the trajectory of the weather system might have been vastly different and resulted in the tornado not occurring. While it has never been shown that such a minute input could have such a dramatic effect on the weather, the butterfly effect has been used by many as a short hand for expressing the sensitivity that chaotic systems have to seemingly insignificant changes (Briggs & Peat, 1999; Gleick, 1987).

Non-linear feedback is the basis of a system's sensitivity to initial conditions (Capra, 1996). Feedback occurs when the output of a system is fed back as input in a process that is known as "iteration" (Warren, Franklin & Streeter, 1998). As with general systems theory, the feedback loop can be either negative or positive, that is either deviation reducing or deviation amplifying (Hudson, 2000). Negative feedback loops regulate a system over time. A classic example of negative feedback is that of coyote and rabbit populations. As coyotes feed on rabbits, the population of rabbits decline. This in turn means that coyotes have less food which leads to a decline in the coyote population which allows the rabbit population to recover.

In contrast, positive feedback loops amplify differences and change the system dramatically rather than regulating it (Wheatley, 1999). After several iterations, an indiscernible difference leads to completely unexpected results. Arthur (1990) provides an example of positive feedback that occurred in the video recording industry. The VCR market started out in the 1980s with two competing formats selling at about the same price: VHS and Beta. As the two systems competed, VHS took a small lead in the market share due to external circumstances, luck, and other actions by the companies involved in the VCR business. This difference was fed back into the system because there were a few more VHS customers talking about their videotape players, and videotape rental stores began to stock a few more VHS tapes. As a result, customers who owned a VHS recorder had more choice so that even more people began to buy VHS recorders. The initial small difference in market share meant that eventually the Beta format disappeared from stores. Positive feedback loops explain why there is often little relationship between the strength of the cause and the consequence of its effect in chaotic systems (Wheatley, 1999).

Attractors

A fundamental concept in chaos analysis is that of an attractor (Williams, 1997). Most complex systems exhibit what mathematicians refer to as attractors: "states to which the system eventually settles, depending on the properties of the system" (Lewin, 1999, p. 20). Attractors can be thought of as the boundaries within which a system operates (Pryor & Bright, 2007). Without boundaries there is no system—just absolute disorder. Attractors are feedback mechanisms that a system utilises in order to sustain stability, respond to

perturbations, and initiate change (Sanders, 1998). Before Lorenz's work, it was believed that chaotic systems tended, like classical linear systems, to move towards equilibrium in the form of three types of non-chaotic attractors: fixed point, pendulum, and torus attractors (Krippner, 1994).

Fixed point attractors provide a basin of attraction to which a system is drawn. This type of attractor describes the behaviour of dynamic systems that tend to come to rest over time (Crutchfield, Farmer, & Norman, 1986). An example that is often given of a fixed point attractor is that of a marble rolling in a bowl and coming to rest at the bottom. Once the steady-state condition is achieved, the system remains static and no longer evolves. A pendulum attractor occurs when a system oscillates between two values that keep repeating in the same order over a fixed interval of time (Williams, 1997), for example, a beating heart or a clock pendulum. Torus attractors are a more complex form of a pendulum attractor. Systems under the influence of a torus attractor follow patterns of movement that are repeated with slight differences in each repetition. Bloch (2005) notes that when torus attractors are in play there is an illusion of change. She offers organisational change as an example of a process that often follows a torus attractor. There is initially a sense that things have changed as people and systems are rearranged but soon after it becomes apparent that little change has actually occurred.

A chaotic system is characterised by strange attractor patterns that allow it to fall into a familiar pattern without ever repeating itself exactly. It was Lorenz who first discerned the existence of strange attractors through his investigation of weather patterns (Sardar & Abrams, 2004). Due to the large number of factors that interact with one another to create the weather, it is impossible to predict the weather with any accuracy. Yet, there are long-term patterns that manifest themselves in terms of seasons and climate. As Gleick (1987) observed: "The system is deterministic, but you can't say what it's going to do next" (p. 251).

The advent of high-speed computers has been important in terms of understanding the behaviour of non-linear systems (Capra, 1996; Wheatley, 1999). Computers allowed scientists to identify strange attractor patterns of behaviour in chaotic systems that provided order in the apparent chaos. Wheatley (1999) described watching the seemingly random

behaviour of a chaotic system find order as its movements were tracked as a point of light on a computer screen:

The system careens back and forth with raucous unpredictability, never showing up in the same spot twice. But as we watch, this chaotic behaviour weaves into a pattern. The chaotic movements of the system have formed themselves into a shape. The shape is a “strange attractor,” and what has appeared on the screen is the order inherent in chaos. (p. 116)

Briggs and Peat (1989) suggest that the movement created by strange attractors are not that of chaos but rather that of wholeness. When the focus is on individual moments or fragments of experiences, only chaos is apparent. But if one were to look at the behaviour of the same system over time, patterns and themes begin to emerge as strange attractors exert their influence. As Wheatley (1999) writes, the “wild gyrations” of chaotic systems “are held within an invisible boundary” (p. 22). It has been described as “invisible order” (Cartwright, 1991) “hidden order” (Riverin-Simard, 1998) and a “deeper level of patterned order” (Capra, 1996). The strange attractor illustrates the stability and hidden structure of a system that otherwise seems without pattern (Gleick, 1987). This is what distinguishes the function of a system that is chaotic from one that is random (Capra, 1996).

Edge of Chaos

A tenet of complexity theory is that a delicate balance of chaos and order is optimal for the successful evolution of a system. The term “edge of chaos” was coined by Christopher Langton (1986) in relation to his research on cellular automata. He found that there was a narrow transition point in the systems that he was studying between order and chaos where “chaos and stability pulled in opposite directions” (Lewin, 1999, p. 51). From this perspective, systems suffer from being both too ordered and not ordered enough (Warren et al., 1998). Systems that are too ordered are not able to give birth to anything new. Likewise, systems can become so disordered that they are not able to develop complexity.

Systems that teeter at the edge of chaos “enliven enough diversity to adapt to environmental demands in a novel way” (Bütz, 1997, p. 5). Warren et al. (1998), citing Waldrop (1992), maintain that “genuinely complex structures arise in a region on the edge of order and chaos, where they can take advantage of the possibility of sudden change inherent in non-linear dynamics while maintaining the order necessary for continuity” (p. 365). Similarly, Kauffman (1995) contends that life thrives at the edge of chaos by making multiple adaptations prior to returning to a steady state. This is the case because it is at the edge of chaos where conditions are neither too restrictive nor too unbounded for successful evolution to occur (Campbell & Mayer-Kress, 1997). In this regard, both the family studies and organisational management literature provide instructive examples. Warren et al. observe that the most adaptive families are those whose function is characterised in the middle range of change. Families that showed too little or too much order were not as adaptive. Similar findings have been found in the functioning of organisations. Organisations thrive when they have some but not too much structure (Brown & Eisenhardt, 1998). This middle ground allows an organisation to be structured enough to be efficient but open enough that it can take advantage of opportunities. Richards (1996) argues that the ability to function at the edge of chaos is an important condition for creativity and problem solving.

Applications of Chaos and Complexity Theory

This section begins with a discussion of how chaos and complexity theory has been applied in the social sciences in ways that appear to be informative for the career development field. Discussion then moves to direct applications of chaos and complexity theory to the career development field that have already appeared in the literature. This expands on the chaos-oriented approaches to career guidance that were identified in the previous chapter (p. 41). The final section critiques the application of chaos and complexity theory to the career development field.

Applications to Social Sciences

Prior to the publication of Gleick’s (1987) seminal work *Chaos: Making a New Science*, most of the chaos and complexity literature appeared in the fields of mathematics,

physics, and engineering (Bolland & Atherton, 1999). Since then, it has been applied to diverse fields including urban management (Cartwright, 1989, 1991), organisational development (Wheatley, 1999), health administration (Smith & Jones-Devitt, 2007), business management (Brown & Eisenhart, 1998), psychology (Bütz, 1995, 1997), social work (Hudson, 2000, 2005; Warren et al., 1998), career development (Pryor & Bright; 2003a, 2003b), and other social science fields.

The primary value of chaos and complexity theory to social science fields is heuristic (Bütz, 1997). It serves as an analogy or metaphor that provides a reference point for contemplating complex phenomena (Bolland & Atherton, 1999; Briggs & Peat, 1999). Ketterer (2006) has argued that chaos and complexity theory provides “new points of departure for the analysis of a system or organisational behaviour” (p. 48). The perception of reality that is presented by chaos and complexity theory has profound implications for all fields of study (Capra, 1996; Sardar & Abrams, 2004). It fundamentally calls into question the assumption of western industrial societies that uncertainty can be eliminated by controlling and conquering nature (Briggs & Peat, 1999). The existence of positive feedback loops means that non-linear change and unpredictability are the norm rather than the exception. According to Cartwright (1991), the concepts put forward by chaos and complexity theory require us to rethink our deep-rooted beliefs in the virtues of order and predictability. From this perspective, the ability for an individual to accept non-linear change and unpredictability without cognitive discomfort becomes important (Bolland & Atherton, 1999).

At the same time, the existence of strange attractors in chaotic systems tells social scientists that there are patterns and themes that provide boundaries to their behaviour. This requires a shift in emphasis from predicting a system’s behaviour to looking for approximations and patterns that show themselves over time (Bütz, 1997). The notion that systems flourish at the edge of chaos suggests that order is not always desirable. In the context of urban management, it means accepting the possibility that a chaotic city may be preferable to one that is orderly (Cartwright, 1991). From a human services perspective, crisis points are viewed as opportunities for growth (Bolland & Atherton, 1999).

In the context of social work, Warren et al. (1998) contend that chaos and complexity theory implies that disorder may be an essential part of the human change

process. If this is the case, then “a certain disequilibrium, possibly including unpredictable reactions, sudden changes in thinking and behaviour, and distressing emotions, may also be a necessary part of those human change processes” (p. 368). Similarly, applications in the organisational development field propose that disruptions and confusion are often essential conditions in order for creativity to emerge in an organisation (Wheatley, 1999).

In relation to urban management, Cartwright (1991) asserts that the dynamics of chaotic systems suggest a planning approach that is quite different than those traditionally used. Given that the behaviour of chaotic systems is only predictable in the short term, planning strategies should be incremental rather than comprehensive in scope and rely on a capacity for adaptation (Cartwright 1989). Furthermore, Cartwright (1991) suggests that planning in relation to chaotic systems may be more successful when it is viewed as “a succession of judicious nudges rather than as a step-by-step recipe” (p.49). Correspondingly, Plsek and Wilson (2001) propose that “minimum specifications” provide more room for flexibility than detailed plans in terms of human and social services planning. Minimum specifications are a few simple rules that evolve from organisational dialogue that maximise the chances that creative progress will be made toward a system’s goals. Rather than specify particular actions, they provide a sense of direction and boundaries in which the system can move. These minimum specifications provide a middle ground between too little organisation, which impairs efficiency, and too much structure, which makes it difficult to take advantage of new opportunities (Brown & Eisenhardt, 1998).

Strange attractors have been explored in psychology as a means of understanding human behaviour. Bütz (1997) considers personality to be a strange attractor. If an individual’s behaviour was random rather than bounded by the strange attractor of their personality, all behaviours would have an equal chance of occurring at a given time (Middleton, Fireman, & DiBello, 1991, cited in Bütz, 1997). This is clearly not the case given that while it may be difficult to predict the specific behaviour of individuals, their behaviour seldom surprises people who know them well.

Direct Applications to Career Development

Pryor and Bright have worked extensively on applying chaos and complexity theory directly to career development and career counselling practice (Bright & Pryor, 2005, 2008; Pryor et al., 2008; Pryor & Bright, 2003a, 2003b, 2005a, 2006, 2007). Borrowing from the work of chaos and complexity theorists such as Lewin (1999) and Sanders (1998), they proposed a chaos theory of careers that conceptualised career pathways as characterised by both order and unpredictability. Pryor and Bright (2003b, 2007) viewed individuals who are building a career as complex dynamic systems acting within a medium of other systems such as the local labour market and national and global economies. As such, individuals' career paths were subject to the same dynamics as all complex systems: unpredictability and non-linear change (Bright & Pryor, 2005).

Several career development theorists have claimed that chaos and complexity theory implies that it is impossible for individuals to plan their careers with certainty (Bloch, 2005; Drodge, 2002; Pryor & Bright, 2003a, 2003b). Drodge noted that an important inference for career counsellors is that "unpredictability is the status quo" and that the prevailing models of career development "might be based on false premises of stability, predictability and linearity" (p. 49). Chaos and complexity theory has suggested that while career-related goal setting might be effective in the short term, it is rarely so over a longer time horizon. In complex dynamic systems in which career planning generally occurs, long-term goal setting was not feasible because of the unpredictability and non-linear change which is inherent in such systems. Setting long-term goals was viewed as an attempt to "impose a point attractor [fixed point attractor] on reality and to limit room to take advantage of new opportunities that might arise" (Pryor & Bright, 2007, p. 395).

Some have argued that human behaviour can fall into fixed point or pendulum attractor patterns that limit the growth of an individual. Drodge (2002) observes that individuals settle easily into a preferred basin of attraction, meaning they settle at a fixed point, in terms of their career which is familiar and secure but which may be stagnant and ungratifying. Individuals with fixed point attractors often see only one possible occupation and a singular pathway toward their goals (Bloch, 2005). This occurs when a young person feels obliged to follow the same career pathway as other family members (Pryor & Bright, 2007). Another attractor pattern that has been applied to individuals' careers is that of a

pendulum attractor. Those caught in this attractor pattern are often trapped by the inertia of indecision as they are pulled from one attractor to another (Bloch, 2005; Pryor & Bright, 2007). For example, an individual who wants both job security and to pursue a career in the arts may not be able to make a career decision because of the existence of a pendulum attractor.

While not explicitly referring to vocational personality (interests, skills, and preferences) as a strange attractor, Riverin-Simard's (1998, 1999, 2000) work seems to imply as much. Based on the longitudinal study of the careers of 1000 Canadians over the age of 40, she found that the career pathways of many participants were typified by numerous ruptures and departures. Yet underneath the apparent disorder, participants' vocational personalities provided an invariant that ordered their career pathways. Like other systems under the influence of a strange attractor, patterns emerged over time.

Pryor and Bright (2007) contend that many career development issues arise as a result of applying closed-systems thinking to an open-systems reality. Those who utilise closed-systems thinking have a strong sense of personal control and expect their environment to function in a stable and predictable way. In contrast, an individual who employs open-systems thinking acknowledges the limitations of their control and the inherent unpredictability of their environment. Table 3.1 summarises the differences between open and closed-systems thinking discussed by Pryor and Bright (p. 385) [see next page].

Table 3.1

Differences Between Closed and Open- systems Thinking

Closed-systems thinking	Open-systems thinking
The unexpected should/will not happen.	The unexpected can/sometimes will happen
High risk taking without a backup strategy	Risk taking with a backup strategy
“Life should be fair”	“Life has no guarantees”
A strong sense of personal control	A recognition of human limitation
Disregard of contingency	Contingency planning
Linearity of change	Non-linearity of change
Exceptions are errors and should be disregarded	Exceptions can be determinative and significant
Limited inputs to respond to change	Creativity in response to change

Closed-systems thinking can be effective under certain constrained conditions in which there is a high degree of clarity, a great deal of accurate information, low costs associated with changing course, or in a situation where there is a pressing need to decide (Pryor & Bright, 2007). However, many career decisions do not conform to these conditions. More commonly, there is considerable ambiguity, incomplete or inaccurate information, high costs associated with changing course and no pressing need to decide. Bright and Pryor (2008) write that under such conditions, closed-systems thinking about career decisions is “less likely to be effective and run the risk of lulling the individual into a false sense of certainty, or limiting the individual to an unnecessarily constrained and unimaginative range of choices” (p. 68).

Pryor and Bright (2007) cite a range of ways that people may react to unwanted change if they are utilising closed-systems thinking. This can include a sense of bewilderment and disorientation; a response of frustration, anger, and a sense of injustice;

feelings of depression and a sense of being overwhelmed; helplessness and feelings of inadequacy; a loss of confidence; a decline in willingness to take risks; and the development of a victim mentality.

Critique

There appears to be little if any critique of the application of chaos and complexity theory to the career development field. The primary scholarship in the field related to chaos and complexity theory has occurred through the joint efforts of Pryor and Bright in Australia. However, their major works have not been well cited. Most scholars that have cited their work have done so as a way of supporting their contention that uncertainty pervades most people's career pathways (see for example, Gati & Tal, 2008). Similarly, the works of Bloch (2005) and Drodge (2002) have not been widely cited.

In light of this, it is instructive to look at the criticism that has been levelled at the application of chaos and complexity theory more generally in the social sciences. The primary critiques have been that such applications are not appropriate (Stewart, cited in Sardar & Abrams, 2004) or that they are simply a renaming of concepts that have already been explicated (Mayntz, 1997). Although not specifically directed at the application of chaos theory to social work practice, Zimmerman (1989) concedes that, at times, social work theorists have been guilty of putting forward "misleading, and sometimes incorrect allusions to concepts from the physical sciences" (p. 53). Bütz (1997) agrees that social scientists have in the past fallen prey to "sciencification" (p.xviii). Ketterer (2006) emphasises that "the significance of the perception of chaos in social systems, from the viewpoint of science (with its demands for theory generation and predictive validity) must be viewed as tenuous and earthbound at best" (p.48). Those who wish to apply chaos and complexity theory to the career development field would be well advised to heed Bütz's (1997) caution that applications to social science fields should be primarily heuristic, that is, the theory provides a useful framework for analysing complex social systems rather than a template that can be overlaid from the physical to the social sciences.

This thesis uses chaos and complexity theory as a central conceptual lens. Although the theory arose from the fields of science, it has great potential for the field of career development as a heuristic tool. One of the most important things that chaos and

complexity theory offers to the career development field is what Briggs and Peat (1999) refer to as its “built-in humility.” On the one hand, it tells career practitioners that they cannot predict with any certainty how interventions will impact on an individual (Hudson, 2000). On the other hand, it means that small interventions can potentially help with seemingly intractable problems.

Conclusion

One of the main contributions of chaos and complexity theory to the career development field is that it normalises uncertainty and change for career decision makers. It suggests that we are asking an impractical question when we ask a young person to have a long-term career plan. While short-term forecasts may have some validity, long-term forecasts are futile (Stewart, 1989). However, within this “chaos,” chaos and complexity theory tells us there is hidden order that can be discerned through actively identifying patterns and themes.

Recently, there have been efforts to apply chaos and complexity theory to the career development field in general. The more specific area of the school-to-work transition has not to date received similar attention. Instead, the vagaries of young people’s career paths are often pathologised. This thesis explores how the school-to-work transition can be understood if uncertainty and change is considered to be the nature of reality rather than an aberration. Attention now moves to the methodological framework that was developed for this study.

Chapter Four

Methodology and the Research Process

Introduction

The purpose of this study is to explore how recent secondary school graduates in Canada determine which careers to pursue. This research seeks to provide a more comprehensive understanding of the ways in which young people make career decisions. In investigating these processes, this study addresses three research goals:

- To understand how young people in Canada who successfully complete secondary school construct their career pathways;
- To examine how young people’s resources (individual, family, social and environmental), and the messages they receive, influence their career pathways;
- To consider the implications of these findings for the ways that parents, career advisors, and policy makers can assist young people in making positive career-related transitions after graduating from secondary school.

This chapter begins with a discussion of the rationale for using a qualitative approach that was informed by a constructivist grounded theory methodology. Discussion then moves to ethical issues related to the study. Following that, the research process is detailed including a description of the research sample and the methods of data collection and data analysis that were utilised. The chapter concludes with a review of the measures taken to establish the trustworthiness of the study’s findings.

Rationale for Using a Qualitative Approach

Qualitative research strives to examine social situations and interactions by having the researcher enter the world of others to gain a holistic rather than a reductionist understanding of the subject matter (Patton, 2002; Schwandt, 2000). According to Creswell (2007), qualitative researchers study a small number of cases and a host of variables that draw a “complex, holistic picture” of the problems or issues faced by research participants.

A central objective of qualitative methodologies is extracting and interpreting the meaning of participants' experiences (Denzin & Lincoln, 2007), finding a plausible account of their lives, while at the same time ensuring that the researcher's understanding of reality does not overly influence interpretation of the data. Within a qualitative research paradigm, the experience of the researcher can serve both a positive and negative role. The researcher's own experience helps them to co-construct meaning from the data that is generated (Clandinin & Connelly, 2000). However, the researcher may also bias interpretation by assuming their exposure to a topic gives them a privileged insight into its meaning (Dwyer & Buckle, 2009).

A qualitative methodology was well suited to the goals of this study. This study sought to build on findings from the provincial and national surveys of Canadian youth transitions after they graduate from secondary school (Andres, 2002; Bowlby & McMullen, 2002; Thiessen & Looker, 1999). These studies have provided a broad understanding of the pathways followed by young people in the immediate years after secondary school and the factors that influence the school-to-work transition. However, they are limited in their ability to explain how young people make career decisions and how influencing factors such as their aspirations, social expectations, and internal and external resources interact with one another. The intricacies and complexities of the school-to-work transition are best understood by placing young people's voices at the centre of the research process (Galambos & Leadbeater, 2000; Wyn, 2005). Qualitative approaches are helpful in examining aspects of complex behaviours, structures, and interactions that are difficult to access through quantitative methodologies (Strauss & Corbin, 1990). Qualitative methodologies are also useful for identifying interventions that might be helpful to people experiencing the problem under investigation (Hoshmand, 1999).

There are a host of approaches associated with qualitative research. Creswell (2007) identifies five approaches to qualitative inquiry which he contends are most frequently used by qualitative researchers: narrative, phenomenological, grounded theory, ethnographic, and case studies. The collection and analysis of data for this thesis was informed by research methods associated with grounded theory methods (Charmaz, 2006; Glaser & Strauss, 1967; Strauss & Corbin, 1998).

Grounded Theory

A central purpose of this study is to understand how young people construct their career pathways and the effect that resources and messages have on their pathways. Grounded theory was chosen as the methodology for this study because as Creswell (1998) has asserted, it is well suited to studies (such as this one) where the phenomenon under investigation is not well understood and to those who hope to “offer insight, enhance understanding, and provide a meaningful guide to action” (p. 12).

Bryant and Charmaz (2007a) have noted that the term grounded theory can be used to refer to both the result of the research process and the methods used during the research process. They have suggested using the term “grounded theory methods” when discussing methods and “grounded theory” when denoting the results of using the methods. This thesis will follow their suggested convention.

Grounded theory methods are an inductive form of inquiry that Charmaz (2006) defines as “a type of reasoning that begins with a study of a range of individual cases and extrapolates from them to form a conceptual category” (p.188). Glaser and Strauss developed grounded theory methods during their study of terminally ill hospital patients in the early 1960s during which they developed a systematic ethnographic approach to research (Timmermans & Tavory, 2007). Their grounded theory method was first outlined in their book *Awareness of Dying* (Glaser & Strauss, 1965) and further explicated shortly afterwards in *Discovery of Grounded Theory* (Glaser & Strauss, 1967). By the late 1980s, grounded theory methods became the dominant qualitative methodology assisted by the publication of *Qualitative Analysis for Social Scientists* (Strauss, 1987) and soon after Strauss and Corbin’s (1990) publication of the *Basics of Qualitative Research* (Timmermans & Tavory, 2007). These texts formalised the grounded theory methods that were suggested in the *Discovery of Grounded Theory*.

According to Charmaz (2006), the development of grounded theory methods in the 1960s occurred at a time when qualitative research was widely criticised for being “impressionistic, anecdotal, unsystematic, and biased” (p.5). In response to this criticism, grounded theory methods offered systematic strategies for qualitative studies that could generate theory grounded in the data through inductive reasoning. This stood in contrast to quantitative approaches to theory generation that emphasised the deduction of testable

hypotheses from existing theories. However, Bryant and Charmaz (2007b) have observed that the grounded theory methods advocated by Glaser and Strauss mimicked in some ways quantitative approaches by claiming to provide an approach where an objective external reality could be discovered and that it was possible to collect and analyse data in an unbiased fashion.

Over time, Glaser and Strauss took grounded theory methods in divergent directions (Charmaz, 2006; Creswell, 2007). Strauss and Corbin (1990, 1998) developed new technical procedures that emphasised verification rather than the comparative methods stressed in Glaser and Strauss's earlier work. Glaser's (1978, 1992, 1998) approach has remained consistent in most ways with the interpretation of grounded theory methods that was put forward in his original work with Strauss and is commonly referred to as classic grounded theory (Charmaz, 2006; Holton, 2007).

Since its beginning, grounded theory methods have responded to epistemological changes in the social sciences. Though Glaser continues to promote a positivist approach to the method (Charmaz, 2006), Strauss, and others like Charmaz, have continually advanced grounded theory methods. Many qualitative researchers now understand that their experiences and worldview impact on how they see and view phenomena. Findings are now conceived as being co-constructed by the researcher, participants, and influenced by contextual factors rather than objective truths waiting to be discovered (Lincoln & Guba, 2000). This "postmodern turn" (Clarke, 2005) has impacted on grounded theory methods. Strauss showed early on that he was anticipating this change when he acknowledged the impact of the researcher on the data and argued that the researcher was not just a neutral observer (Strauss & Corbin, 1990). This epistemological debate, and Strauss' publication of prescriptive methods with which Glaser disagreed, produced a methodological and ideological split between the founders of grounded theory methods that is reflected in most of their subsequent writing (Strauss, 1987; Strauss & Corbin, 1990, 1994, 1998; Glaser, 1992, 1998). The split between Glaser and Strauss could almost have been predicted from the beginning given that their collaboration represented the combining of two rival analytic traditions in sociology:

These traditions were represented on the one hand by Glaser, who brought to grounded theory the rigor associated with the quantitative survey methods of sociological research at Columbia University; and on the other hand, by Strauss, whose background lay in the ‘symbolic interactionist’ tradition of qualitative research as taught and practiced at the University of Chicago. (Dey, 1999, p.25)

Given its divergent roots, it is not surprising that grounded theory methods have both “positivist and interpretivist inclinations” (Charmaz, 2006, p. 127). Bryant and Charmaz (2007b) maintain that despite the existence of both positivist and interpretivist lenses in Glaser and Strauss’s early work, the “data-oriented positivist idea of the method predominated” (p.33). According to Bryant and Charmaz, Strauss’s subsequent work intimated a more interpretivist understanding of the research endeavour but it was not until later that Strauss and Corbin (1994) stated that their approach involved doing the interpretive work advocated by symbolic interactionism. Symbolic interactionism is a theoretical perspective that assumes that people create shared meanings through their actions and that these meanings become their reality (Charmaz, 2006). This perspective is closely associated with Blumer (1969) who articulated the following three premises: humans act toward things based on the meaning that the thing has for them; the meaning of things for individuals emerges from the social interaction they have with others; and the meanings are established and modified through an interpretive process undertaken by individuals.

The relationship between symbolic interactionism and grounded theory methods continues to be controversial. Clarke and Friese (2007) maintain that “with deep roots in symbolic interactionist sociology and pragmatist philosophy, grounded theory methods can be viewed as a theory/methods package with an interpretive, constructionist epistemology” (p.366). In contrast, Glaser (2005) characterises symbolic interactionism as an overused theoretical code.²⁰ In a similar vein, Stern (2007) maintains that “I’ve always thought of SI [symbolic interactionism] as a kind of backdrop for grounded theory, an assumption that

²⁰ Theoretical codes specify possible relationships between conceptual categories that emerge through the data analysis process.

people act and react based on their relationships, but I don't see it as *the* theoretical code that can bring a study together" (p. 121, original emphasis).

Mills, Bonner, and Francis (2008) observed that Strauss and Corbin's body of work "vacillates between postpositivism and constructivism" (p. 28). While on the one hand insisting that their work is interpretive and that a researcher's location impacts on their interpretations, Strauss and Corbin also emphasised the use of methodological tools to verify findings. Charmaz (2006) has remarked that such careful attention to the application of their methods is only necessary when researchers view themselves as the conduit of the research process rather than the creator of it. The ontological ambiguity in Strauss and Corbin's work has led some researchers to say that "people can find support in it for any ontology that they wish" (MacDonald & Schreiber, 2001, p. 44). Nevertheless, Mills et al. (2008) have argued that the interpretivist stance taken by Strauss and Corbin (1994) presaged the development of a constructivist approach to grounded theory methods.

Despite Glaser's reluctance and Strauss and Corbin's ambiguity, many grounded theory methods researchers now argue that there is a need to account for the co-construction of reality and the role researchers play in data analysis when using grounded theory methods. This epistemological and ontological shift is apparent in the increasing popularity of a constructivist approach to grounded theory methods as detailed by Bryant (2003a), Charmaz (2003a, 2006), and Clarke (2005).

Constructivist Grounded Theory

Charmaz (2000, 2003a) dichotomises grounded theory methods broadly into two types: constructivist and objectivist. Using this framework, the approaches advocated by Glaser and Strauss and Corbin are categorised as being objectivist whereas Charmaz's work along with other contemporaries such as Clarke (2005) and Bryant (2003b) situate themselves as constructivist. A decade ago, Charmaz (2000) highlighted the differences between objectivist and constructivist grounded theory methods:

A constructivist grounded theory distinguishes between the real and the true. The constructivist approach does not seek truth – single, universal, and lasting. Still, it remains realist because it addresses human realities and assumes the existence of

real worlds. However, neither human realities nor real worlds are unidimensional... The constructivist approach assumes that what we take as real, as objective knowledge and truth, is based upon our perspective. (p. 523)

She goes on to say: “objectivist grounded theorists adhere more closely to positivistic canons of traditional science...They assume that following a systematic set of methods leads them to discover reality and to construct a provisionally true, testable, and ultimately verifiable ‘theory’ of it” (p. 524).

Bryant and Charmaz (2007b) have argued for the need to “re-position GTM [grounded theory methods] in light of the current philosophical and epistemological landscape” by embracing a constructivist approach that takes a “middle ground between realist and postmodernists’ visions” (p. 50-51). Constructivism is a research paradigm that denies the existence of an objective reality, “asserting instead that realities are social constructions of the mind, and that there exist as many such constructions as there are individuals (although clearly many constructions will be shared)” (Guba & Lincoln, 1989, p. 43). As Freedman and Combs (1996) have argued, these individual constructions are also the result of how people interact socially in determining what is meaningful and true.

Charmaz (2008) emphasises that she does not adhere to the radical constructivism put forward by von Glaserfeld (1995) which contends that there is no knowable reality outside of one's mind. She maintains that her approach to grounded theory methods is premised on the ontological stance that there is a real world that can be known in multiple ways. Charmaz (2008) asserts that constructivist grounded theory has its epistemological roots in social constructionism (Berger & Luckmann, 1966). Charmaz assumes that “people make their worlds but do not make them as they please. Rather, worlds are constructed under particular historical and social conditions that shape our views, actions, and collective practices” (p.409).

Charmaz seems to be arguing for a balanced approach that combines social constructivism and constructionism. Crotty (cited in Patton, 2002) makes a useful distinction between the two:

It would appear useful, then, to reserve the term *constructivism* for the epistemological considerations focusing exclusively on ‘the meaning-making activity of the individual mind and to use constructionism where the focus includes ‘the collective generation [and transmission] of meaning’ ... Constructivism taken in this sense points out the unique experience of each of us. It suggests that each one’s way of making sense of the world is as valid and worthy of respect as any other, thereby tending to scotch any hint of a critical spirit. On the other hand, social constructionism emphasizes the hold our culture has on us: it shapes the way in which we see things (even in the way in which we feel things!) and gives us a quite definite view of the world. (p.97)

Charmaz acknowledges the social construction of selfhood while retaining the importance of personal experience and reflexivity. Likewise, Schwandt (2001) refers to social constructionism as a “second strand of constructivism” that focuses on social process and interaction. Schwandt (2001) asserts that there are both weak and strong versions of social constructionism. Strong versions of social construction “appear to deny any ontology of the real whatsoever” (p.33). Gergen (1994) is representative of the strong variety when he says “one must be suspicious of all attempts to establish *fundamental* ontologies – incorrigible inventories of *the real*” (p. 75, original emphasis). According to Schwandt, weaker varieties of social constructionism do not assert that everything is socially constructed, but that reality exists in a form that is concrete, though not necessarily objectively knowable.

Glaser (2002) has been vitriolic in his criticism of constructivist grounded theory and has gone as far to say that Charmaz is “misled in thinking that the constructivist vision is in fact GT [grounded theory]. It is just another QDA [qualitative data analysis] method in pursuit of accuracy” (para. 40). Rather than pitting one grounded theory method against the other, some have been more conciliatory. Bryant and Charmaz (2007a) have referred to the various approaches as a “family of methods”. Mills et al. (2008) have argued that there is a “methodological spiral” that began with Glaser and Strauss' work that still continues today. They maintain that the various forms of grounded theory methods can be situated on this methodological spiral. On one end of the methodological spiral is the original work done

by Glaser and Strauss that positioned the researcher as a neutral observer tasked with discovering a knowable truth about the phenomena under investigation. Constructivist grounded theory is positioned at the latter end of this methodological spiral, actively repositioning the researcher as the author of a reconstruction of experience and meaning. This approach to grounded theory methods repositions the researcher from being the “all knowing analyst” to instead being an “acknowledged participant” (Clarke, 2005, pp xxvii, xxviii). The choice of constructivist grounded theory for this thesis reflects my assumptions about life (Emerson, Fretz & Shaw, 1995), that reality is constructed and therefore experience is an interpretation of reality. This assumption is intuitively congruent with my lived experience having worked in many different cultures around the world, and having felt the need to conform to the conventions of behaviour in the small community where I grew up. Both experiences have suggested to me that what I assume to be an unbiased interpretation of reality is in fact the result of a process of co-construction between myself and those around me.

Grounded Theory Methods

This study employed the grounded theory methods used by both objectivist and constructivist grounded theorists including: simultaneous collection and analysis of data; a two-step data coding process; constant comparative methods; memo writing; and theoretical sampling (Charmaz, 2006; Glaser & Strauss, 1967; Strauss & Corbin, 1998). Charmaz (2008) maintains that when “stripped of their epistemological clothing” (p. 403), the grounded theory methods put forward by Glaser and Strauss are useful tools for social constructivist analysis. Moreover, grounded theory methods can be used by researchers who are working from a range of paradigms including positivism (Glaser, 1978, 1992, 1998), critical realism (Holton, 2006), feminism (Wuest & Merritt-Gray, 2001), and constructivism (Bryant, 2003b; Charmaz, 2003a, 2006; Clarke, 2005).

The fluid, open-ended, and interactive nature of research is emphasised in constructivist grounded theory; hence, grounded theory methods are viewed as “flexible, heuristic strategies rather than formulaic procedures” (Charmaz, 2006, p. 251). In contrast, objectivist grounded theorists believe that the grounded theory methods need to be applied carefully in order to represent the objective truth.

Schwandt (2001) reminds us that from a constructivist point of view, researchers' interpretations are viewed as having been influenced by the values, beliefs, and life experience that they bring with them to the research process. From this perspective, the researcher cannot help but bring their personal values, experiences, and priorities to the research endeavour. Accordingly, from a constructivist perspective, theories developed through a grounded theory methods approach are viewed as being "constructed" rather than "discovered" (Charmaz, 2006). Any theoretical renderings put forward by constructive grounded theorists are seen as interpretive representations of the world rather than an exact picture. Rather than searching for the "truth," a constructivist grounded theory tries "to find what research participants define as real and where their definitions of reality take them" (Charmaz, 2006, p. 272).

Charmaz (2003a) stresses that researchers who use a constructivist grounded theory approach should openly acknowledge the influence of prior experiences on their perspective. This requires reflexivity on the part of the researcher. Robson (2002) defines reflexivity as "an awareness of the ways in which the researcher as an individual with a particular social identity and background has an impact on the research process" (p. 22) and this should be shared with readers (Cutcliffe, 2003). According to Charmaz (2006), researchers who do not engage in reflexivity "elevate their own tacit assumptions and interpretations to 'objective' status" (p. 132).

Charmaz's point is very important as I am a trained professional in the field of career and vocational counselling, and therefore inevitably have been influenced by my experiences working with young people during the decade after high school, my professional training, and the dominant paradigms of the career development field. With this in mind, I used a number of strategies to bracket my prior knowledge in an effort to avoid "filtering data through pre-conceived hypotheses and biases" (Glaser & Holton, 2004, para. 44). According to Starks and Brown Trinidad (2007), bracketing is a process in which researchers "recognise and set aside (but do not abandon) their a priori knowledge and assumptions, with the analytic goal of attending to the participants' accounts with an open mind" (p.1376). In grounded theory studies, consulting with colleagues and mentors and writing memos throughout the data analysis are the primary ways that bracketing occurs (Cutcliffe, 2003; Finlay, 2002). A discussion about the bracketing strategies I used

in relation to establishing the trustworthiness of the findings will be discussed later in this chapter.

A key debate for grounded theory methods is the place of the literature review (Charmaz, 2006; McGhee, Marland, & Atkinson, 2007). Classic grounded theorists advocate delaying a review of extant literature until data analysis is complete in order to prevent undue influence on the findings through preconceptualisation of the research (Glaser, 1978; Glaser & Strauss, 1967). For example, Holton (2007) is unequivocal about the use of extant literature when she says that the researcher should begin with “no preconceived problem statement, interview protocols or extensive review of the literature” (p. 269). While Stern (2007) agrees with Holton’s position, she accepts that the requirement for thesis proposals and research grants may require that at least some review of the extant literature is done prior to the commencement of data analysis.

Urquhart and Fernández (2006) recommend that literature reviews in grounded theory studies be conducted in two phases: a preliminary review prior to data analysis and an extensive review once theoretical codes have been established. They emphasise that the preliminary review sensitises researchers to the topic under investigation while the extensive review positions the findings of a grounded theory study in relation to existing knowledge:

The preliminary literature review examines what theory exists in the area and how other people may have addressed aspects of a research problem but does not then impose a framework on future data collection. Importantly, this preliminary literature review is conducted on the understanding that it is the generated theory that will determine the relevance of the literature. The literature review is revisited, and extended, once the theory has been generated from the data. The notion of a preliminary literature review helps graduate students embarking on a dissertation, as it provides a way to conform with departmental or school requirements, while its draft or preliminary status indicates to the student that this is not a final statement on theory in the area. (p. 461)

Charmaz (2006) recommends that concepts researchers glean from doing a preliminary literature review lie dormant until they have developed conceptual categories and delineated relationships between them. Once this has occurred, researchers are encouraged to locate their work within relevant literatures as part of the analytic process. Similarly, Bryant and Charmaz (2007a) contend that an extensive analysis of relevant extant literature is important after a grounded theory has been developed in order to raise its theoretical level and to identify what conversations the researcher should enter. Urquhart and Fernández (2006) refer to this phase as an integrative one in which the researcher compares and contrasts the emergent theory with extant theories to render the finding in the context of existing knowledge. Charmaz (2006) observes that a literature review that is positioned after research findings emerge “provides a place to engage the ideas and research in the areas that your grounded theory addresses” (p.168).

The Research Process

The following section begins with a discussion about the ethical issues related to the study. Following that, the research sample and sampling strategies are described. Discussion then moves to a description of how data collection and analysis was conducted. This section concludes with an explanation of how the extant literature was used in relation to theory generation. Figure 4.1 provides an overview of the research process (see next page).

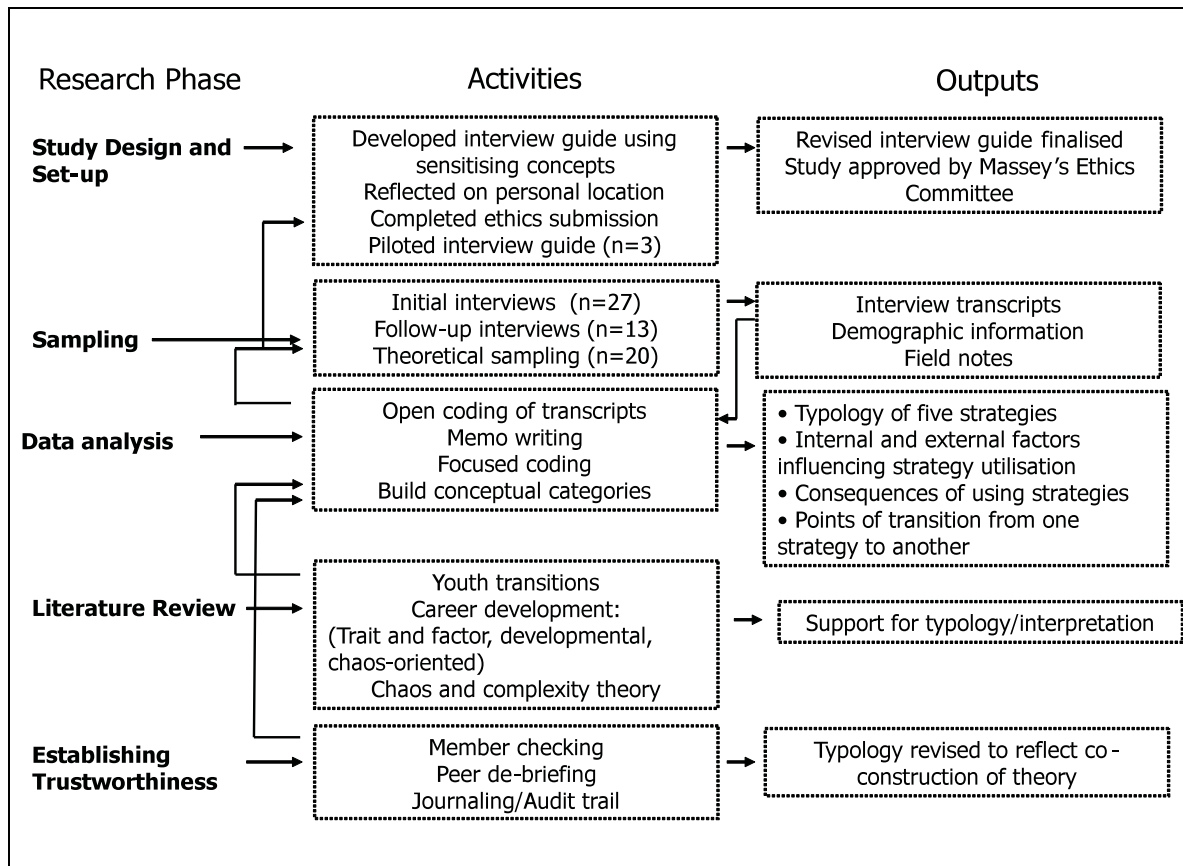


Figure 4.1: Overview of the research process

Ethical Issues

Prior to beginning fieldwork, the Massey University Human Research Ethics Committee approved the proposal for this research project (see Appendix A). An amendment to the Committee's initial approval was secured after data collection began to allow for theoretical sampling from the Resilience Research Centre (RRC) study²¹ (see Appendix B & Appendix F). The proposal addressed four issues that are highlighted below.

Emotional safety. There were no anticipated physical, social, or economic risks posed to the participants involved in this research study, and few expected emotional risks. However, in some cases, participants were asked to recall stressful situations, which could

²¹ The present study was part of a larger study. More details will be provided in a later section of this chapter that discusses the research sample (p. 92).

trigger uncomfortable memories for some. For example, one research participant cried as she recounted being emotionally abused in her first career-related job after graduating from university. Others became distraught as they shared their dissatisfaction with the situation in which they were at the time the interview was conducted. In several cases, the emotional stress related to the criticism they were receiving from others about their situation.

Participants were made aware at the beginning of each interview of the possibility that the interview might be emotionally distressing. All participants were given the name and contact information for a mental health care professional in case they wanted to process issues and feelings that had surfaced as a result of the interview. If they appeared to be emotionally distressed during the interview, an attempt was made to acknowledge their feelings and to normalise the difficulty that many young people experience during the school-to-work transition.

Confidentiality and anonymity. Measures were taken to protect the identity of participants and third party organisations by changing identifying information of participants and by disguising or deleting details regarding third parties. Presentation of all personal details was done in such a way as to make any single individual non-identifiable. Specifics were changed in order to ensure anonymity.

The individual who transcribed the interview tapes signed the “Transcriber’s Confidentiality Agreement” (See Appendix C) in which she agreed to keep confidential all the information provided to her on the tapes. She deleted the transcript from her computer once she had sent it to me.

Steps were also taken to protect the confidentiality of participants through storing the consent forms, audiotapes, and interview transcripts in a locked filing cabinet. The audio recordings were either returned to participants or destroyed once transcripts were finalised. Once the study was completed, the interview transcripts and consent forms were stored in separate, locked cabinets at Dalhousie University in Halifax, Canada. The consent forms and interview transcripts will be transferred to the research archives of the University once five years has elapsed.

Informed consent. A number of participants were recruited through individuals who were friends, family members, or professional colleagues of mine. The person referring the individual sought permission from potential participants for me to contact them. To avoid coercion or appeasement, the person who made the referral was not told if the individual had agreed to participate in the study. Individuals who agreed to be contacted were given information about the purpose of the research, what the study would entail, and the time required. This was presented as the “Letter of Information” (See Appendix D). Prior to the interview participants were given the “Participant Consent Form” (See Appendix E) that informed them that they were in no way obligated to take part in the study, that they could withdraw from the study at any time, and that they could decline to answer specific questions, without penalty. Participants were also asked if they had any questions prior to signing the consent form. It was emphasised that they could stop the interview at any time if they had questions about why they were being asked about particular things. All participants were given my email address in the event that they had follow-up questions about the research.

Reciprocity. Participants were each offered a \$25 honorarium for their participation in the study. In several cases, research participants noted that the interview itself or the discussions in the follow-up interview helped to normalise the turbulence they had experienced since graduating from secondary school. The benefits that many participants seemed to gain in having their experience normalised spoke to the powerful discourse that defines “typical” and “non-typical” transitions. Participating in the research and learning that most of the other participants had also experienced non-typical transitions helped them to view their own experiences as being normal. A summary of the research findings will be sent to all research participants who requested it.

Research Sample

The findings of this study were based on interviews with 47 young adults. The inclusion criteria were that they be between the ages of 23-30 and had graduated from a Canadian secondary school. The sample included youth who had taken a variety of

different educational and employment occupational pathways after graduating from secondary school.

The sample used for this study was a subset of a larger sample that was recruited for a research project funded by the Canadian Education and Research Institute of Counselling (CERIC) in conjunction with the RRC. I approached the RRC with a proposal to conduct a study under their auspices that examined the way that young people negotiated the school-to-work transition. The RRC applied to CERIC for funding with the agreement that I would be hired as the principal researcher and project manager. The RRC study was completed in June, 2008. A diagram that provides details of the distinctions between the RRC study and the present study is included in Appendix F.

In order to sample youth with a range of educational and employment experiences, the study sought what Patton (2002) describes as a maximum variation purposeful sample. A snowball sampling technique was utilised in which research participants and colleagues who worked in a range of settings—including universities, polytechnics, and employment centres—were asked to identify young people known to them who could give the study the desired variability. Participants were chosen purposively to glean maximum variation in the career pathways taken. For example, recruitment focussed at one point on finding participants who had never attended a tertiary institution. At another point, an attempt was made to find young people who had left tertiary education prior to completion.

The initial plan was to include African-Canadian young people in order to provide insight into the ways that cultural and related issues impacted on their transition experiences. The sub-population of African-Canadians was chosen because they are the largest visible minority group in Halifax. A concerted effort was made to recruit African-Canadian participants through a colleague who was part of that community. These efforts were not successful. On several occasions, interviews were scheduled but the young people did not show up for the interview nor could they be re-contacted. Due to time constraints, it was not possible to continue recruitment efforts. Successful recruitment would likely require a greater immersion in the African-Canadian community in Halifax, and much more effort to form partnerships with career professionals from that community in order to tailor the research to their needs.

Recruiting participants was a challenge in this study because of the need to maximise the amount of variation in the career pathways taken by participants. While it was relatively easy to find participants who were attending tertiary institutions, it was more difficult to locate young people who had either never attended a tertiary education institution or had completed their studies (Arnett, 2000a). It would have been arduous to achieve the variability that the study contained without having well developed personal and professional networks in the community where the study primarily occurred. My professional colleagues were able to identify young people who had not attended tertiary education or were struggling to find work after attaining tertiary credentials. Through my personal network, I was able to identify young people who had followed a range of career pathways and found themselves in an array of circumstances in relation to employment. In the early stages of data gathering, my professional and personal contacts were the primary source for identifying potential participants. As time went on, participants themselves became the prime referral source. Participants at the Halifax site were sampled to the point of saturation.

In the later stages of the study, theoretical sampling was undertaken. Theoretical sampling is a strategy used by grounded theorists that involves collecting delimited data in order to “refine ideas, not to increase the size of the original sample” (Charmaz 2003a, p. 265). This type of sampling is employed as the grounded theory is constructed and provides direction as to what groups or subgroups the researcher turns next in terms of data collection. The premise of theoretical sampling is that the emerging categories and the researcher’s understanding of the developing theory guide the sampling (Creswell, 2007; Morse, 2007). Through theoretical sampling, the researcher selects a sample of individuals based on their contribution to the development of the grounded theory. Theoretical sampling can occur through seeking more participants or asking earlier participants about experiences that were not covered in the initial interviews (Morse, 2007).

In the present study, theoretical sampling was utilised in order to test and refine a typology that emerged from data analysis. A key process that was identified in the study related to participants engaging in “finding a career-related place.” A typology was constructed that identified five strategies that participants used as they engaged in the process of finding a career-related place. As the typology emerged, recruitment focussed on

finding participants who were using particular strategies in different ways. Participants from the RRC study who were not part of the Halifax sample were interviewed to further explicate the typology and later used as case studies to elaborate the typology. They were chosen because they appeared from their initial interviews with the RRC research assistants to be information rich in terms of delineating and refining the emerging typology (Morse, 2007).

Prospective participants for the theoretical sample were contacted by email to see if they were willing to participate in an additional interview by phone that would be used for my doctoral study. Permission to conduct follow-up interviews for the RRC study was approved by the Research Ethics Board at Dalhousie University and an ethics extension was given by the Massey University Human Ethics Committee to cover the data collection for the theoretical sample. Moreover, participants were informed that data from the interview would be used for my doctoral thesis. If they were willing to participate, a “Consent Form for PhD study” (see Appendix G) was sent to them prior to the interview. An email acknowledging that they had read the form and consented to participate was accepted as a proxy for their signature.

Data Collection

Studies that use a grounded theory approach can employ a number of different methods including participant observation, audiovisual methods and interviews (Creswell, 2007). Charmaz (2006) has observed that interviews are particularly well suited to grounded theory studies because they provide an “open-ended, in-depth exploration of an aspect of life about which the interviewee has substantial experience, often combined with considerable insight” (p. 29). Interviews were selected as the primary method because of the study’s focus on understanding young people’s experiences in relation to the school-to-work transition. According to Patton (2002), interviewing provides researchers with the opportunity to find out things that cannot be directly observed such as previous experiences, feelings, thoughts, and intentions.

Patton (2002) outlines three different approaches to collecting qualitative data through interviewing: the informal conversational interview, the general interview guide approach, and the standardised open-ended interview. Informational conversational

interviews are also referred to as “unstructured interviews” (Corbin & Morse, 2003). Patton emphasises that the informality of unstructured interviews does not mean they are unfocussed. Rather, this type of interview is guided by the overall purpose of the inquiry with the researcher free to go wherever the respondents and the data lead. The general interview guide approach is structured by an interview guide that ensures that a similar line of inquiry is used with each participant. This type of interview is often referred to as semi-structured in that the interview guide provides some structure by outlining the general areas of inquiry but within these parameters the researcher is able to change the sequence of questions and the wording of questions in response to the answers given by participants (Kvale, 1996). A standardised open-ended inquiry is a structured interview process in which interviewees are asked exactly the same questions in the same order to create more uniform data. This type of interview does not allow the researcher to pursue questions or issues that were not identified before the study began (Patton, 2002) and was therefore poorly suited to this study.

A decision was made to use a semi-structured approach to interviewing for this present study as recommended by Charmaz (2006). An interview guide was developed to provide structure to the interview (See Appendix H). However, there was considerable latitude during the interviews for participants to provide wide-ranging answers to questions and to introduce issues that were not directly asked about. The interview guide was developed using a number of what Blumer (1969) referred to as “sensitising concepts” which give a researcher “a general sense of direction” (p. 148). Charmaz (2003a) has referred to sensitising concepts as “those background ideas that inform the overall research problem” and has stated:

Sensitizing concepts offer ways of seeing, organizing, and understanding experience; they are embedded in our disciplinary emphases and perspectival proclivities. Although sensitizing concepts may deepen perception, they provide starting points for building analysis, not ending points for evading it. We may use sensitizing concepts only as points of departure from which to study the data. (p. 259)

Patton (2002) has observed that using sensitising concepts in relation to a qualitative study involves examining how the concepts manifest themselves in a particular setting or amongst a particular group of people. Among the most important sensitising concepts used in the development of the interview guide was an awareness of the complexity and unpredictability of young people's career pathways and a contextual understanding of career development. These sensitising concepts came from my work as a career counsellor and a reading of the career and related literatures required to perform that job.

The interview guide was informed by the findings of two recent Canadian quantitative studies that indicated that the transition from secondary school to full employment was often complex and circuitous (Andres, 2002; Bowlby & McMullen, 2002). It was designed to allow participants to share the complexity of their school-to-work transitions. Participants were first asked what they were doing at the time of the interview and then asked to retrace the pathways that they had taken since leaving secondary school. The guide included a series of prompts that asked about their past and present activities in a range of spheres including school, paid work, volunteer work, travel, and leisure activities. The inclusion of such a broad range of activities was informed by the career development literature that highlights the role that apparently disparate activities can have on career decision making (Inkson & Myers, 2003; Super, 1990).

A contextual understanding of career development led me to include questions in the interview guide about the role that internal and external resources played in participants' career pathways. These questions emanated from Super (1990) and Patton and McMahon's (1999, 2006) work that has documented a host of internal and external factors such as aptitude, interests, familial supports, chance events, and labour market conditions that impact on individuals' career pathways. Related to a contextual perception of career development was my perception that both internal and external "voices" influenced people's career decisions (Campbell & Ungar, 2004a, 2004b). Of particular importance are external voices, what we hear from family, friends, and within our broader community, that convey the values of the dominant culture in which individuals participate (Thorngren & Feit, 2001; Ungar, 2001). In this regard, the career literature emphasised the important role that the expectations of others played in the career pathways taken by young people

(Helwig, 2008; Looker & Lowe, 2001; Middleton & Loughhead 1993; Sebald, 1989). With this in mind, the interview guide included questions about the messages participants received from others about what they should have done when they graduated from secondary school and those they received about what they actually did.

While sensitising concepts provide a starting place, it is essential that a researcher “moves from sensitizing concepts to the immediate world of social experience and permits that world to shape and modify his conceptual framework” (Denzin, 1978, cited in Patton, 2002, p. 278). The sensitising concepts used to direct the present study were expanded and supplemented by concepts that emerged throughout the course of the study. While the study confirmed the existence of a multitude of factors that influenced the complex and circuitous nature of participants’ career pathways, the study also identified behaviours like participants’ tolerance for ambiguity and resistance skills as factors I was not aware of prior to conducting the study. Moreover, the study showed the idiosyncratic ways in which factors influenced participants’ career pathways. For example, the experiential approach to identity development during the school-to-work transition is well documented in the literature as discussed in Chapter Two but was not one with which I was familiar. The applicability of chaos and complexity theory to the school-to-work transition, which became the primary conceptual lens for this study, was also an unanticipated finding despite my background in the career field.

The original interview guide was modified after it was piloted with three participants. At the outset, the initial interview guide included a more structured approach to gathering information about the activities that participants had engaged in since leaving secondary school. It attempted to structure the interview by asking participants to talk about their activities based on the following categories: tertiary education, paid and unpaid work, being unemployed, and travel. The initial interview guide also included questions about how satisfied the person was as they moved through various activities. After piloting the interview guide, a decision was made to decrease the amount of structure in the questions and to discard questions about how satisfied participants were with particular activities. These changes were made because the original interview guide imposed a structure on the interview that hindered rather than facilitated discussion. The revised interview guide was less structured and allowed participants to tell their stories in whatever order they chose.

Young people who agreed to participate in the study were invited to meet for an interview at a time and location that was convenient for them. The majority of interviews occurred in meeting rooms located at Dalhousie University's School of Social Work or the Nova Scotia Community College with a small number taking place in participants' homes. Prior to starting the interview, participants were reminded of the purpose of the interview that had been outlined in the Letter of Information and their right to stop the interview at any time as outlined in the Participant Consent Form. They were also asked if they had any questions prior to starting.

There was no fixed amount of time given for each interview. This allowed the interview to be governed by how much participants wanted to share rather than being dictated by a set time frame. Interviews varied in duration between one and two hours with an average time of approximately 80 minutes. As recommended by Kvale (1996), a debrief was conducted at the end of the interview related to what had stood out for each participant during the conversation. When appropriate, I also shared with participants the similarities between their experiences and other participants' experiences. After the tape recorder was turned off, demographic information was collected (See Appendix I). Once an interview ended, I wrote process notes about the interview in relation to the research questions and the emerging findings of the study.

An important consideration in qualitative studies such as the present one where data is collected through interviews is that the quality of the findings are closely related to the interpersonal skills of the interviewers (Gall, Gall, & Borg, 2005). In this regard, my training as a social worker and my experience as a career counsellor was advantageous. I found my counselling skills were helpful in developing rapport with participants. Moreover, my training ensured that I never assumed that my understanding of words were the same as the participant's and often asked them to clarify terms they used. For example, one participant told me that he was "kind of at a standstill right now." Rather than assuming that I knew what he meant by the word standstill, I asked him to clarify. He indicated that it had the following meaning for him:

Figuratively, I kind of think of myself standing in front of a fork in the road, a couple of forks in the road and just kind of deciding which way to go. Do I just

continue to go on the road I'm going with my job or branching off, going back to school. Then that kind of leads into different things as far as what I want to do at school, what I want to take, maybe what career paths I want. I have just a few more opportunities, not really opportunities but things that I could possibly do, might want to do and just deciding which one might be the one I want to take.

These kinds of clarifications helped me provide more in-depth descriptions of participants' experiences and perspectives on the school-to-work transition.

There has been some concern raised in the literature about researchers with counselling backgrounds reverting to a therapeutic role during research interviews (Connolly & Reilly, 2007). Kvale (1996) draws a sharp distinction between the goals of research and therapeutic interviews by noting that the former is focussed on the acquisition of knowledge while the focal point for the latter is the client's needs. Kvale emphasises that any possibility that a research interview might become therapeutic in nature should be considered in the research design. My work with young people during the often tumultuous transition between school and work alerted me to the possibility that the interview might elicit emotional and cognitive stress. With this in mind, participants were told at the beginning of the interview that there was a counsellor that they could contact if they wished to discuss issues that arose. However, Kvale also points out that there are times when it might be appropriate for research interviews to become quasi-therapeutic in the sense of offering assistance that might help to alleviate troubles that interviewees were experiencing. There was only one occasion when this occurred. Despite being passionate about his work as a musician and being self employed as an arborist, Jeff said that he did not have a career. During the debriefing phase of the interview, I reflected back to him various ways that other participants had defined a career and that from their perspective he might have a career. Jeff responded to this observation by saying: "I guess so, I'd never thought about that but yeah. That's interesting. Thanks. Yeah I used to think about it more as just a monetary thing. I'll try to think of it differently, thanks."

Once the first interviews were transcribed verbatim, they were sent to participants to be checked for accuracy, and participants were invited to clarify or supplement any of their responses. Each research participant was also offered the opportunity to participate in

a follow-up interview. The purpose of the follow-up interview was twofold. It provided an opportunity to clarify and accumulate more details about experiences participants had discussed in the initial interview. It also granted an occasion to receive feedback about the emerging findings. During the follow-up interviews, participants were asked to speculate on the application of the findings to themselves and to their peers. Thirteen of the 27 participants at the Halifax site chose to participate in follow-up interviews. Ten of the participants choose to conduct the follow-up interview by phone while three opted to meet in person. The follow-up interviews ranged in duration from 15 to 45 minutes.

Data Analysis

The simultaneous collection and analysis of data is an important component of the grounded theory approach. The researcher is involved in data analysis from the beginning of data collection because the analysis informs and shapes further data collection (Charmaz, 2006; Glaser, 1978; Glaser & Strauss, 1967). In the present study, data collection and analysis happened concurrently through a process that was recursive rather than linear. As Creswell (2007) notes, data collection in a grounded theory approach is a “zigzag approach: out to the field to gather information, into the office to analyse the data, back to the field to gather more information, into the offices, and so forth” (p. 64).

As recommended by grounded theory methods (Charmaz, 2006; Glaser & Strauss, 1967), data analysis began after the first interview was transcribed through the coding of interview transcripts and memo writing. These data analysis methods are central to the grounded theory method (Charmaz, 2006; Glaser, 1978, 1998). These analytic methods are examined in this section along with a description of how they were used in the present study. The final part of this section elucidates how categories and subcategories were constructed.

Coding. Coding consists of labelling segments of the data with a word or several words that summarise and categorise the content. It provides the analytic link between the data and an emergent theory that explains the data (Kelle, 2007). The codes are created by the researcher as they define what they are seeing in the data. A constant comparative method was used throughout the coding processes, such that each subsequent interview was

coded with the previous interviews and emergent theory in mind (Glaser & Strauss, 1967; Lincoln & Guba, 1985; Miles & Huberman, 1994). The purpose of the constant comparative method is to continually assess whether the data supports the emerging categories (Glaser, 1978).

Both open and focussed coding procedures were utilised in this study. Once data collection began, interview transcripts were coded through open coding procedures as soon as possible. Open coding fractures the data by labelling specific incidents with a word or several words that indicate what, from the researcher's point of view, is occurring in the data (Holton, 2007). As recommended, open coding in this study began with a line-by-line analysis of interview transcripts that labelled each segment of data with an action word or words (Charmaz, 2006; Glaser, 1978). According to Charmaz (1990), proceeding line-by-line "keeps the researcher examining the collected data, rather than lapsing entirely into theoretical flights of fancy which have little connection to data" (p. 1168).

During open coding, a number of questions suggested by Charmaz (2006) were asked of the data including:

- What process is at issue here?
- Under what conditions does this process develop?
- How does the research participant think, feel, and act while involved in this process?
- When, why, and how does this process change?
- What are the consequences of the process? (p. 51)

Some examples of codes that emerged from the study through open coding are provided in Appendix J. Some codes emerged "in vivo", or within the data itself. For example, "taking deciding time" was the term that one participant used to describe the period of time immediately after secondary school in which he took a low-skilled job rather than start a tertiary education programme. This gave him time to think about what he really wanted to do. Analysis of subsequent participant interview transcripts indicated that the code captured what many participants were doing. Many of the codes like "becoming ill"

and “experiencing unexpected events” emerged from the open coding related to factors that influenced the career pathways participants had taken.

As part of the RRC research team, Dr. Ungar was asked to code several transcripts independently prior to me proceeding with focussed coding. While the coding was generally found to be consistent, there were several instances where the coding was not fully supported by the data or where Dr. Ungar identified processes that I had not. In such cases, I reviewed the data and reconciled differences in interpretations. For example, he identified “negotiating” as a process in which participants seemed to be engaging. From his perspective, the pathways that participants followed were mediated by important people in their lives. In other words, they negotiated with those around them about the value of the particular pathways they wished to take or were taking, His input led me to look for ways in which participants were responding to the messages that they were receiving. As a result of this investigation, codes such as pleasing, resisting, and compromising were added that captured how participants negotiated the messages they were hearing from others.

The second phase of coding in grounded theory methods is referred to by some grounded theorists as “focussed coding.” It is more directed and conceptual than line-by-line coding and occurs after a “strong analytic direction” has emerged from the open coding process (Charmaz, 2006, p. 57). Focussed coding involves the researcher choosing the open codes that appear most capable of synthesising and explaining large amounts of their data. Charmaz (2006) has noted that data sets often contain more than one analytic direction that can be pursued. In the present study, open coding of ten interview transcripts indicated that the process of maturation was one that was significantly represented in the data. It appeared that the process of finding a career-related place was part of a larger process of maturation. Given the goals of the research project, a decision was made to focus solely on the process of finding a career-related place. Thus, focussed coding related to those codes that best captured how participants were going about determining what they wanted to do and what influenced that process. Examples of focussed codes included “knowing what they want,” “browsing,” “drifting from one thing to another,” “settling for something that doesn’t fit,” “learning about what they want,” “experiencing what they don’t want,” “reaching out for help,” “declining opportunities that don’t fit,” “receiving messages,” and “experiencing chance events.”

Memo writing. In grounded theory studies, the coding of data occurs simultaneously with data analysis through a process of conceptual memo writing which captures the “theorist’s ideation of the emerging theory” (Holton, 2007, p. 268). Charmaz (2006) has referred to memos as “preliminary analytic notes” about what researchers think about the codes or any other ideas that emerge from reflection on the data as their study proceeds. Through memo writing, researchers continually ask themselves what the data is revealing and begin identifying categories for theory building (Glaser, 1978, 1998).

Researchers using grounded theory methods are encouraged to stop and analyse their codes and emerging categories as they occur to them (Charmaz, 2006; Glaser, 1998). According to Charmaz (2006), the process of memoing throughout the data analysis phase helps to increase the level of abstraction of the researcher’s ideas. Glaser (1998) has observed that memos tend to become more “mature” as a study progresses, as the concepts begin to sharpen in meaning, and as consideration is given to relevant literature.

Memoing was used extensively in this study throughout the coding and categorising process as a way of exploring and documenting my ideas about what was occurring in the data. Appendix K contains two memos that were written early in the data analysis process as I grappled with understanding the meaning of the data. The first captures my early thoughts about the power of the messages that participants received about their career pathways. The second memo shows some of my thoughts about the different ways that participants reacted to uncertainty. Appendix L includes a lengthier memo that was written during the middle stages of the data analysis as I considered the central role that gaining more experience played in the process of participants finding a career-related place.

Conceptual categories. The categories for synthesising and explaining data emerged through the focussed coding process (Charmaz, 2003a). Categorising is the process of selecting the codes or themes that best explain from the researcher’s perspective what is occurring in the data (Charmaz, 2006). The researcher then strives to specify the conditions under which the category operates and changes and its relationship to other categories. Memoing is considered to be a key strategy for the development of categories from focussed codes (Charmaz, 2003b; Glaser, 1978, 1998). Charmaz (2006) emphasises that memos form the core of a researcher’s grounded theory.

Memo writing was used extensively in this study to construct the five categories of strategies that participants utilised to find a career-related place. Appendix M contains a series of memos that were written later in the data analysis process as the categories and subcategories were being refined. The categories that emerged from the data were related to five strategies that participants appeared to be using to find their career-related place (navigating, exploring, drifting, settling, and committing). In addition, the following subcategories were identified: consequences of using the strategies, points of transition from one strategy to another, and factors that influenced the utilisation of the different strategies.

Early on, I began to see that finding a career-related place was a learning process for most participants. Some of my early codes categorised what participants were doing as “knowing before doing,” “knowing through doing,” and “doing before knowing.” Participants who knew before doing had at least some experience with their chosen career. Those who knew before doing made career choices based on information other than direct experience. For example, someone may have given them information about their career choice or told them that it was a good choice to make. Participants who had been doing before knowing were trying out various career options but had not made a decision as to whether or not they were going to pursue what they were doing as a long-term career.

I also began coding in terms of the level of proactivity participants brought to the process. Some were proactive about following pathways that were of interest to them or exploring areas that they were curious about. Others were passively swept along by others’ expectations or what was closest at hand. Additionally, I began to think about the different ways that young people went about learning about themselves and the options available to them. My early attempts at developing a typology were captured in the memos that were written concurrently with the data analysis. The terms “navigators,” “explorers,” “survivors,” “floaters,” “settlers,” and “satisfiers” emerged as I tried to understand what participants were doing in terms of finding a career-related place.

About midway through the data collection and analysis process, I began reading the emerging adulthood literature that has developed since Arnett (2000a) coined the term a decade ago to describe this period of exploration that many young people engage in between their late-teens and mid-twenties. Of particular interest was the delineation that

Arnett (2004) has made a distinction between exploration activities that varied in their level of proactivity. He noted that “exploring” might be too lofty a word to describe what some emerging adults were doing and that “meandering,” “floundering,” or “drifting” might be a more apt description. Through a closer examination of the data, it was evident that while drifting was a haphazard approach it nevertheless did result in the gathering of more information. My observation that the “drifting” I noted in my data was a form of exploration was further reinforced by Flum and Blustein’s (2000) view that young people’s exploration encompasses activities that occur as a result of systematic actions together with the exploration that may result from unplanned or fortuitous life experiences.

It also became evident over time that navigating was a way that participants gathered more information. The majority of those who implemented a navigation strategy immediately after secondary school knew little about their chosen option. All of the participants who employed this strategy said they learned a lot more about their choice as they navigated towards it. They were in effect exploring an option as they went through the process of implementing their plan. Once navigating and drifting were identified as forms of exploration, I looked for a term other than “exploring” to describe an exploratory approach where participants did not know specifically what they wanted to do but were being proactive about investigating options. I tried the term “investigators” but this did not resonate as much as “explorers” with participants when member checks were conducted.

Originally, “settling” and “committing” were labelled as the outcomes of the process of finding a career-related place. However, it became apparent through checking my analysis with participants that these categories were more fluid than I originally believed. This led me to question whether participants found a career-related place in any long-term sense. There were several participants who utilised committing and settling strategies only to have things change. Reflecting on my experience as a career counsellor with people in their 40s and 50s, I could see in their experiences the folly of believing that one has permanently found a career-related place in the form of a job or occupation that they will hold until retirement. In their narratives, this adherence to a singular career was also reflective of a foreclosure on further adult identity development (McAdams, 1993). Even those who stayed in the same occupation or with the same company often underwent significant changes in the work that they did on a day-to-day basis. The typology was

presented to ten participants during follow-up interviews. All agreed that it described both their experiences and the experiences of young people they knew.

Use of Extant Literature

The literature review was conducted in two phases as recommended by Urquhart and Fernández (2006) in their approach to grounded theory studies. Though the research is, as noted in Chapter Two, presented in a way that reflects conventions for writing a thesis (the literature review appears early in the document rather than concurrent with or following the findings), it was actually conducted in a way that is congruent with grounded theory methodology. During the pre-study phase, I examined the career development and career counselling literature and findings from longitudinal quantitative youth transition studies that had been conducted in Canada. This preliminary literature review along with my training as a career counsellor helped to delineate my research questions and to develop the sensitising concepts that were used to design the interview guide. As with Walsham (1995, cited in Urquhart & Fernandez, 2006), it is my view that it is possible for researchers to be aware of existing theories without believing they represent the final truth in a particular subject area. Details about the measures taken to bracket my pre-study knowledge base will be provided in the following section (p. 107).

An extensive review of the literature review began after the five categories of strategies that participants utilised to find a career-related place began to emerge through the process of data analysis. This review was conducted under the premise that extant concepts had to “earn their way” into the findings (Glaser, 1978). A number of extant concepts were supported by the data. Of particular significance was the process of identity exploration that was identified by a number of youth transitions studies and recent developments in the career literature related to the non-linearity and unpredictability of many people’s career pathways. It is notable that I was not familiar, for the most part, with either bodies of literature prior to conducting the study. While I was aware of trait and factor and developmental approaches to career development, the application of chaos and complexity theory to the field was not familiar to me until a comprehensive literature review began after the theoretical codes were developed. Similarly, the notion of

experience-based identity development during the young adulthood years that emanated from the youth transitions literature was new to me.

Trustworthiness of Findings

Traditional evaluation criteria used in quantitative research such as validity and reliability are not standards to which constructivist qualitative research strives (Lietz, Langer & Furman, 2006). Charmaz (2006) stresses that theoretical rendering from such studies are viewed as being co-constructed by researchers and participants rather than representing objective truths. As noted by Lietz et al. (2005), qualitative methods must attend to the co-construction of meaning while at the same time “being able to hear and give priority to the meanings of their participants” (p. 444).

Lincoln and Guba (1985, 2000) have suggested that qualitative researchers strive to substantiate the trustworthiness of their findings. Trustworthiness is established when research findings closely reflect the meanings developed by participants. Lincoln and Guba (1985) developed four criteria that in some way parallel the criteria used by quantitative researchers: credibility (parallel to internal validity); transferability (parallel to external validity); dependability (parallel to reliability), and confirmability (parallel to objectivity). A description of each measure is described in the following sections, along with their applications to the present study.

Credibility

The core issue related to credibility is “how we ensure rigor in the research process and how we communicate to others that we have done so” (Gasson, 2004, p. 95). Credibility can be achieved in a number of ways including prolonged engagement with participants, persistent observation in the field, the use of peer debriefers or peer researchers, negative case analysis, researcher reflexivity, and member checks (Lincoln & Guba, 1985; Morrow, 2005). According to Lincoln and Guba (1985), credibility is best established through member checks. “Member checks” is a term used to describe the process of getting feedback from research participants about the research findings (Schwandt, 2001).

Member checking was used extensively as the typology of strategies used by participants was constructed. It was checked with ten participants in follow-up phone calls. All agreed that the typology was congruent with their experiences and the experiences of young people that they knew. However, their feedback also made it clear that it was difficult to place an individual with any certainty into one of the categories. This became evident when they were asked to apply the typology to their own career pathway. All ten participants that member checking was conducted with were able to easily apply the typology to their school-to-work transitions. However, they sometimes indicated that they were using a different strategy than I thought they were using at particular junctures in their career pathways. For example, one participant labelled the time she took off after graduating from university as drifting. This was despite the fact that she had spent that year engaging in career counselling and trying out things that interested her. Her understanding of what she was doing spoke to the way in which drifting is often attributed to young people who are not following a “typical” transition pathway. Member checking alerted me to the importance of viewing the typology as heuristic rather than definitive.

Peer debriefing was another strategy that was utilised in this study to establish the credibility of the findings. It involved sharing with knowledgeable colleagues the researcher’s evolving attempts at describing and analysing data (Schwandt, 2001). As a result of being part of the RRC study, it was possible to use peer debriefing extensively in the present study. Consultations with Dr. Ungar about the emerging findings occurred frequently. In addition, halfway through the data collection and analysis process, the emerging findings were shared with four research assistants who were collecting the same data in three other locations.

Before theoretical sampling proceeded, two members of the advisory board for the RRC study, both with PhDs in vocational psychology, were given three interview transcripts along with the typology for their comments. Both agreed that the interview transcripts and their own experiences working with young people supported the findings. Finally, the typology was presented in April and May of 2008 at three career development conferences. Several people in attendance made a point of either talking with or emailing me that the findings resonated with their experiences of working with young people.

Confirmability and Dependability

Confirmability corresponds to the notion of objectivity in quantitative research and is "concerned with establishing the fact that the data and interpretations of an inquiry were not merely figments of the inquirer's imagination" (Schwandt, 2001, p. 259). In quantitative research, reliability means that the same tests would produce the same results. For qualitative researchers, this kind of replicability is impossible to achieve because the research findings are produced by constantly changing interactions between researchers and participants. As Guba and Lincoln (1989) state: "far from being threats to dependability, such changes and shifts are hallmarks of a maturing—and successful—inquiry. But such changes and shifts need to be both tracked and trackable (publicly inspectable)" (p. 242).

Keeping an audit trail is the primary strategy that Lincoln and Guba (1985) advocate for ensuring confirmability and dependability. An audit trail is a document that traces the evolution of a researcher's findings and the rationale for choices and decisions made during the research project. I kept a reflexive journal that chronicled my reactions to the findings, the ways in which my bias might be impacting on the findings, and a record of the methodological decisions that were made throughout the research project. In addition, extensive memoing tracked the evolution of my data analysis.

Transferability

Transferability refers to the possibility that what was found in a qualitative study can be extrapolated to another context. Lincoln and Guba (1985) emphasise that the "burden of proof lies less with the original investigator rather than with the person seeking to make an application elsewhere" (p. 298). This is the case because the original investigator cannot know into what contexts other people might want to transfer their findings. Transferability is achieved when the researcher provides sufficient detail about the self, the research context, research procedures, and the participants to enable readers to speculate on how the findings might be applicable to other settings (Morrow, 2005).

The present study provided the detail required for transferability. Chapter One gave detailed information about my personal location and the context in which this study was conducted. The participant profiles and the case summaries outlined in Appendix N and O provide a portrayal of the young people who participated in this study.

Conclusion

This chapter examined the methodological framework used in this study. The use of constructivist grounded theory methods fit well with my research goals to understand more fully the approaches that young people were using to make career decisions and the factors that impacted upon their choices. I was acutely aware that much was known about factors that influenced young people's choices but little was understood about how they interacted. Furthermore, it was evident that there was limited understanding in the career development literature of how young people went about finding career locations. Constructivist grounded theory methods allowed me to both understand participants' emic views and provide some explanation of the career decision making approaches they were using.

The following two chapters present the findings that emerged from the data analysis. These findings provide insight into how participants constructed their career pathways and how their resources and the messages they received influenced their path. Chapter Five describes the strategies that participants used to find a career-related place and the consequences of using the various strategies. Chapter Six discusses the factors that impacted on the strategies they used.

Chapter Five

Strategies Used to Find a Career-related Place

Introduction

A central question posed by the present study relates to how young people construct their career pathways and the effect that resources and messages have on their pathways. The constructivist grounded theory methods described in the previous chapter enabled me to identify codes and then categories that helped construct an explanation of what was occurring in the data. A key process that was identified in the study related to participants engaging in finding a career-related place. After an introduction of the 47 young people who participated in the study (27 who were recruited into the study and 20 young people who formed the theoretical sample), this chapter will discuss the process of finding a career-related place and how it related to participants' identity explorations. Discussion will then move to the categories and sub-categories that emerged from the study that identified five strategies that participants used to find a career-related place and the consequences for those who utilised different strategies.

As noted in the previous chapter, the constructivist grounded theory methodology used in this study emphasises that research findings should be viewed as being co-constructed by the researcher and participants. Constructivist approaches encourage the generation of new points of view and make researchers sceptical with regard to dogmatic assertions of how people negotiate their career paths in complex environments (Poerksen, 2004). Hence, as recommended by Charmaz (2006), the findings of the present study are offered as “plausible accounts” of participants' experiences rather than “verified knowledge.”

Participant Profiles

The 47 young people who participated in this research ranged in age from 23 to 30 years old. Of those 47 participants, 24 were male and 23 were female. Participants varied with respect to their geographic locations. Twenty-seven were living in Halifax, Nova Scotia. The remaining 20 participants were living in Montague, Prince Edward Island; Guelph, Ontario; and Calgary, Alberta. Participants varied widely in terms of the pathways

that they had taken since leaving secondary school. Appendix N contains a table that summarises the profiles of the 27 participants from Halifax. Appendix O contains another table that provides the profiles of the 20 participants who lived in other geographical locations who were part of the theoretical sample.

Finding a Career-related Place

The majority of young people interviewed either did not have long term career-related plans when they graduated from secondary school or changed their original plans in response to new experiences or changes in their internal and external resources. Although their life stories were very different, the participants shared at least one common struggle after graduating secondary school: they wanted to find a career-related place. While the term "career" was defined for the purposes of this thesis as an individual's life long progression in learning and paid employment, most participants defined a career in terms of an end point rather than a process. None of the participants considered their education to be part of their career and they sharply delineated the differences between having a career and a job. The three most commonly cited criteria for having a career related to it being long term, providing financial stability, and being something the participants were passionate about doing. An additional criteria cited by a few participants was that it was work that would gain them respect from other people. Jordan, who was working as an assistant manager with a telecommunications company, used all three criteria in relation to a career. He considered his work a "very well paying job" rather than a career. He defined a career as:

Something that I can see myself doing for the rest of my life. Something that I can comfortably live with as far as financially and personally as well, as far as being able to deal with it for another fifty years or forty years. Something that I would consider, I can't even put it into words. It's just something that earns you enough respect I guess. That somebody would look at you and say, he's got a career.

For a few participants, financial security was the only requirement in terms of considering a job a career. Anthony's definition of a career was indicative of this perspective:

A career in my mind is something that there's always going to be a need for. A job, you can get terminated, fired. I've had jobs, I worked at Canadian Tire,²² that was a menial job. Any monkey who was trained could do it. I worked at a call centre, that was a little bit more towards a career but again, there was always a constant fear looming overhead, it's like the pressure of oh my God if I don't do this perfect or somebody comes along that's better than me I'm going to get canned. Really, working where I'm at right now, I don't have that kind of a worry. I can always go ahead and train myself and better myself.

Claire, who worked as a fitness trainer, considered her job a career despite it not providing job security. For her, being passionate about her work was the only criteria that she used to determine whether or not she had a career. This was also the case for Stacey who loved being a stay-at-home parent and as a result considered it to be her career. The idiosyncratic ways in which participants defined career meant that only they could determine whether or not they had found a career-related place. Rebecca noted that others might assume that her job as a support worker for autistic children was a career because many of her co-workers considered their work to be one:

Yeah, so my co-workers are where they want to be and this is definitely going to be their career for the next twenty or thirty years. Where for me it's a job because I know it's only going to be another year possibly, before I move on and do some more school to move toward something else.

Though the study sought to understand how young people made career decisions, analysis of the data indicated that selecting careers was a way participants expressed and confirmed their evolving identity. During the decade after graduation, they had much to learn about themselves through the opportunities that were available to them. Lyle, a 25-year-old participant, said:

²² Canadian Tire is a chain of stores in Canada that sells hardware, sporting goods, and automotive parts.

I needed to find out who I really was. I haven't found out who I am completely yet, but I know better now than I did when I finished school. I had no clue. I didn't have any time to figure it out. I was just in school and doing whatever it was. You need time where you can think and work, find out who you are.

For most, finding a career-related place was the result of engaging in a process of trial and error. As they experienced different tertiary education programmes and types of work, they began to have a better sense of who they were and which career paths might suit them. Participants recounted stories of feeling that they had found their career-related place when something “felt right.” Carol's experience is representational:

When I was taking the programme, I wasn't so sure that being an administrative assistant was for me. I did my practicum at a large oil and gas company. I worked under three vice-presidents and realised this is kind of where I want to be.

For others, what they wanted to be changed over time as their identity evolved. This was the case for Torin who at 27 years of age said: “I think I've only really become comfortable with who I am and who I see myself being professionally or in terms of my career, probably in the last year.”

The Participants' Strategies for Finding a Career-related Place

A key finding of this study was that participants appeared to use five different strategies to find a career-related place: navigating, exploring, drifting, settling, and committing. The word “strategy” implies a level of intentionality and proactivity that was not typical of participants' behaviour. As will be explained later in this chapter, strategies generally emerged from a convergence of factors rather than being chosen by participants. However, I have chosen to use the word “strategies” here because there did not seem to be a word that more comprehensively encapsulated participants' actions. A description of how the strategies emerged through the data analysis was provided in Chapter Four.

The five types of strategies identified in the study can be categorised into search and engagement strategies. The search strategies (navigating, exploring, and drifting) related to

the way that participants went about finding a career-related place. The engagement strategies (settling and committing) were those that described the cognition that participants had about the career-related place they had found. It was not uncommon for participants to use a number of strategies either simultaneously or successively. Hence, the typology is offered as a heuristic device rather than an attempt to definitively categorise the activities of particular young adults.

Navigating

When participants used a navigating strategy to find a career-related place, they knew what they wanted to do and were engaged in education and/or work activities necessary to achieve their goals. Though they could clearly articulate a desired destination for their career searches, they may or may not have known very much about the specifics of what they had chosen to do.

Kirsten's experience provided an example of a participant who used a navigating strategy. She was 24 years old and working as a chemical engineer with a large petrochemical company. Kirsten enrolled in a university chemical engineering programme immediately after secondary school and found work in her field soon after graduation:

At the beginning of Grade 12 I had no clue what I wanted to go into, but I was leaning towards chemistry. I had weekly meetings with my teacher advisor to check my progress because I was going to a self-directed learning school. I was discussing with him that I was thinking chemistry and he suggested getting into engineering. When the university was doing their open house for high school students, I went to both presentations by the engineering department and the chemistry department and from that decided whole-heartedly that engineering was the way to go.

While Kirsten appeared to know exactly what she wanted to do coming out of secondary school, she said that she had not been certain about her decision. She had to experience the engineering field through her university courses and cooperative education placement to confirm that engineering was a good career choice for her. As Kirsten said: "Even though I

didn't know what I wanted to do for sure, I thought it was a good opportunity. I don't even know if I knew back then that engineers can do so many different jobs.”

Kirsten was committed to her job at the time of the follow-up interview, but fully expected to be doing other types of work within the engineering field in the future.

Consequences of navigating. The consequences of navigating varied dramatically among participants. For participants like Kirsten, the utilisation of a navigating strategy led to an efficient school-to-work transition. Their plans went as intended and they moved directly into a satisfying career. They liked their tertiary programmes and excelled as students. When they graduated, they found jobs related to their training that were interesting and satisfying. Conversely, others invested considerable time and money into a career pathway only to find that it did not meet their needs or that they could not continue because of the barriers they encountered.

Few participants in the study took a direct route like the one taken by Kirsten. Those who did typically did so by taking occupationally specific tertiary education programmes like engineering or accounting. Often, they had some exposure to an occupation prior to choosing it or some assistance in identifying an occupation that was a fit with their interests and skills. Even so, most navigators did not know very much about their chosen occupation which meant there was an element of chance to their ending up both enjoying the work and finding employment in their field. Those who were able to navigate directly into satisfying work were in an enviable position. By their early to mid twenties, they were well-employed while most of their peers were either still in school or working at low-skilled jobs.

Participants who used a navigating strategy immediately after secondary school were inclined to end up somewhere they did not want to be. More often than not, participants who used a navigating strategy told stories of having chosen a field only to discover that the realities of the work did not interest them as much as they had expected. Jeff described navigating towards computer networking only to find out that it was not something that he enjoyed:

At the time when I went to university, computers were the thing, so that's what I did. Thinking: "I like to play computer games, I'll love computer science." Not the

same thing at all. I went to university for three years and I got my certificate in computer science, which is now just a real expensive banner on the wall.

After that, I went to work for a psychology professor, installing coding software for her. That's when I decided I hate computers. Not really hate them, but I just couldn't . . . I grew up doing forestry for my father. Like planting trees, anything in the woods, so I'm really used to working outside with my hands, doing a lot of physical labour stuff. So I was inside doing the computers [working on computers] and I looked at all the kids walking around campus on a nice day. It was just hard on my head. It really wasn't me. I mean I could do it, but I really didn't like it. I made great money doing it, but I just couldn't stand it. I'd rather make way less money for something that I like to do.

In some cases, participants who were navigating did not stop to consider whether their career choice fit with their interests. As Torin who started in a biomedical engineering programme and continued on with a Masters degree said: "I slipped into biomedical engineering and then kept going with it." Part of this may be because as Chris said, it's easy to become "caught up in the busyness of school" without much opportunity "to catch up with yourself." Chris also observed that it "takes a lot of will to shake yourself out of the path you are on."

Some participants said that navigating toward a particular occupation that you were not sure about "can be a trap" because it was hard not to follow through once you had the certification to go into a particular occupation. This is particularly true for prestigious high paying occupations such as law, medicine, and engineering. Participants reported that it was difficult to resist the money or expectations particularly if they were unsure about what else to do. While some navigators in the study changed course when they realised their path did not fit, others did not switch and settled for what they were doing at the time.

Some navigators expressed a sense of confusion and anxiety when their plans did not work out. This was particularly true for those who had been single-minded about what they wanted to do. Vanessa said that she had decided in secondary school that she wanted to be a doctor and when she was not accepted into medical school she became "bogged down in the mud." It took her many years of drifting and exploring before identifying

another career that she wanted to do. Several participants ended up with high debt loads as a result of navigating toward an occupation only to find out it was something that they did not like. Val incurred a \$20,000 debt obtaining an office administration diploma only to find out that she did not like the work. Ten years later she still owed \$18,000 for a diploma that she had never used.

Many participants who were navigating after graduating from secondary school said they had not looked for or received help. They thought they did not need assistance beyond help with finding out what tertiary education was required to pursue their chosen career path. Most participants who were utilising a navigating strategy at the time they graduated from secondary school said that few, if any, questions were posed to them to ensure that they had some knowledge of the subject area or job they had selected. They were even less likely to be queried about how, if at all, their choice corresponded with their interests and abilities.

Exploring

The use of an exploring strategy in finding a career-related place occurred when participants could not say what they wanted to do specifically, but were engaged in a process of experimentation as a way to learn more about themselves and their options. They were proactive in their search for information about career opportunities, they speculated about areas of interest, and they sought experiences whereby they could determine the fit of particular career options. Explorers, though uncertain about their goals, actively tried to understand where they might put their talents and interests to best use.

Illustrative of a participant using an exploring strategy was 24-year-old Carol. She worked as an administrative assistant for two years with an oil company. Carol loved the fast-paced nature of her work and the interaction she had with people. She was unsure what she wanted to do after graduating from secondary school, but was interested in exploring different possibilities:

I did a little bit of research, but I just wanted to see what would interest me. I thought: “I speak Italian fluently so Spanish might be fun to learn.” I was considering sports medicine for a long time, all through high school. I played sports

since I was fourteen and I still kick box. I really considered that avenue so I took human physiology and human anatomy. I started taking the sciences and that didn't appeal to me.

I just couldn't find anything that I really was interested in at the college. I started looking at programmes that another college does and I went through quite a few different programmes. I started doing more and more research into them. I thought about being a pastry chef because I do have a sweet tooth. Then I thought being a chef or that kind of idea, going to get a Red Seal²³ and working in, maybe owning my own restaurant. That still kind of intrigues me. I do love to cook, but the more I researched and realised being a pastry chef, getting up at three in the morning to own your own bakery, not if I want kids. I like my Monday to Friday, nine to five.

Still unsure after a year at a polytechnic, Carol decided to take some time off to figure out what she wanted to do. She took a retail position and, in the process, learned a lot about herself:

I realised working there that I do like to work with people. I am very much a customer person. I have a bubbly, outgoing personality so I realised that I didn't want to be stuck by myself at a job. I wanted to be able to work with others at some point. With that in mind, it eliminated a lot of different careers where you're on your own. Like an investment planner or something in the financial world. My brother's an accountant; I find it's pretty mundane. I like administration because it's very fast-paced and you're constantly multi-tasking. You've got probably about four projects on the go at a time ... very interactive with other people.

²³ The Interprovincial Standards Red Seal Program (also known as the Red Seal Program) was established more than 50 years ago to provide greater mobility across Canada for people working in the trades. The Interprovincial Standards Red Seal Program acknowledges their competence and ensures recognition of their certification throughout Canada.

Carol's retail job made her realise that she wanted regular working hours and a higher salary. Her brother, who worked in the oil and gas industry, encouraged her interest in the industry. With that in mind, she decided to go back to school. A polytechnic admissions officer suggested that she take an information management programme that would provide a "good starting place" and improve her computer skills. Carol was attracted to the programme because it offered hands-on learning, the possibility of working in jobs where there was a lot of interaction with people and, as a final bonus, elective courses in office applications in the oil and gas industry.

Despite the positive aspects of the polytechnic programme, Carol was still not positive that office administration was the right career choice for her. She looked upon her training as an opportunity to see if this was something she wanted to pursue. It was only through her practicum experience with an oil and gas company that she was able to confirm that a career in office administration was what she really wanted to pursue.

Consequences of exploring. The consequences of exploring were generally positive for those who employed this strategy. It gave them the opportunity to try options out before committing to them and allowed them to stay open to new possibilities. The primary drawback to this strategy was that participants who used it were often subjected to criticism.

One of the most beneficial things about exploring before navigating toward an option was that it allowed participants to experiment prior to making a commitment. Often through the process of exploring a career path, they realised that it was not what they expected. It was generally easier for participants to change course when they had not made a formal commitment to the path by enrolling in a training programme. Rebecca described how a friend's experience taught her the importance of finding out more about options prior to navigating toward them:

So that's what I've been trying to do with different jobs lately is to try to feel things out because I don't want to jump into another degree or go into college and then find out later that I didn't like it. I had a friend and she decided that she wanted to become a teacher. It was too late for her to apply to teaching school. She probably

would have gotten in, she had crazy-good grades and so she looked for jobs teaching and she got a job at a private school and it was great. She had a job for the whole year but she hated it. So if she would have gotten into teacher's college, she would have spent the year there and then she would have found that she hated it. So sometimes it's nice to be able to dabble a little before committing yourself to a degree or certificate. So that you're not wasting money. You are learning things [when you are at college or university] but sometimes it kind of sucks.

Participants who employed an exploration strategy typically made gains in terms of self-awareness and awareness of the options available to them. This in turn helped them to gain confidence in their choices. Vanessa elucidated the importance of engaging in an intensive exploration process with a career counsellor prior to enrolling in a public relations programme:

You doubt yourself a little bit. I kept reminding myself, I had met with a counsellor for a while and this was really important to me. I'm a very methodical person so I needed to think things through thoroughly before I just said okay: "I'm going back to school." I know there were some people that got into the programme later in the summer and just kind of did it on a whim and they're happy with their decision but I needed to know in my mind that I was really making the right decision and it was. I've done a lot of things on a whim and I just didn't want this to be one of them. I guess I feel I'm in a position now where I'm better, more certain of who I am as a person so I wanted to make sure this decision reflected that too.

Participants who utilised an exploration strategy were often subjected to criticism. This was particularly true if the exploration occurred outside of a tertiary institution. Carol described her parents' reaction to her leaving a polytechnic programme to explore options working in retail. Her father said to her: "I didn't move to Canada from Italy to not give you guys the better opportunity so take advantage of it."

Drifting

Participants who used a drifting strategy in relation to finding a career-related place did not know what they wanted to do, were laissez-faire about making choices, or faced numerous barriers to career fulfilment. Being unable or unwilling to actively seek a career, they were apt to “go with the flow” and over time some became stuck. There was a sense of aimlessness and passivity in the stories that drifters told of their tertiary education and work histories.

Antoine was a 27-year-old who spent many years using a drifting strategy. At the time he was interviewed, Antoine had been working for his father in the real estate and construction fields for three years. He did not particularly enjoy the work he was doing, but was not sure what else to do. Antoine explained how he drifted into tertiary education:

When I was going into university, I didn't necessarily have something in mind that I wanted to be. From high school, I had good grades and obviously it was the logical decision. If you have the means to do so, go to university and take the next step which is what I ended up doing.

After completing a university degree, Antoine did not know what he wanted to do. His father pressured him to apply for law school, which he did despite having little interest in studying law:

There wasn't a clear direction that I wanted to go. I tried applying to law school. I guess this ties into some of the things I've done later on, the influences that people have over you. Law school was not necessarily something that I wanted to do myself, but something that my father had pushed for. I'm sure there are many psychological reasons why I know these things—to appease another individual, or trying to make them proud of you, or whatnot.

Antoine was not accepted into law school so he began applying for jobs. He observed that this was a difficult task because he did not know what he wanted to do. He approached his job search in a haphazard rather than focussed way:

Applying for jobs afterwards was, as you would imagine, difficult because I didn't know what it was that I wanted... I tried applying to a handful of different jobs through web sites, which wasn't successful at all. I was applying to different jobs within government. I figured, with my degree in English and with political science, that that would be enough to apply to something within the government sector. Politics was always something that really interested me. I felt it would have been a job that would have been rewarding and fulfilling. Being a government job, it would pay relatively well.

However, I was sort of naïve. It's incredibly difficult to get into government if you don't know anybody or you don't have any connections. What I went through was discouraging and I don't think I exercised all the avenues open to me in order to perform a successful, not just job search, but career search.

I ended up getting discouraged and took a job working at the mall selling shoes. Not my proudest moment but, at the same time, I needed money and I found myself stuck in a rut. I didn't want to work there for a year.

Antoine did not enjoy selling shoes so left the store after 11 months. He was still unclear about what he wanted to do but began working in the real estate business under pressure from his father:

My dad was a real estate agent and I ended up getting into business with him. I took my real estate courses, complete in about six months, and then was working with him. Feel it was like a consolation that's available. It's easy to do so let's go for it.

After two years, it was a bit of a dead end. It wasn't something that I enjoyed, it wasn't something that I was passionate about. It wasn't something that was fulfilling. When my father suggested that I do real estate, it wasn't something that I necessarily wanted to do, but I felt I couldn't say "no."

Consequences of drifting. While not systematic or proactive, drifting into a tertiary education programme or job was a form of passive exploration that resulted in some participants learning more about themselves and being exposed by chance to career options that were of interest to them.

Drifting had the potential to expose participants to a range of experiences that increased their self-awareness. Just as importantly, they became more aware of what they did not want. Rebecca explained how drifting helped her learn more about herself:

I think now I feel more secure in my values and what I want to have in my life. For a long time and even after university, I didn't feel I really knew myself and I think it took travelling and time off and different jobs that I yea or nayed to help me figure that out and then sort of in a way dissecting the jobs or the things that I said "no" to figure out why did I say no to those. So I think I just needed more life experience between university and now to, I can't pinpoint what exactly to know. But things had become clearer and I feel now I know myself better, just through those experiences that I did after university.

Several participants who employed a drifting strategy were unexpectedly exposed to career options that interested them. The primary way this occurred was through "falling into jobs" that were convenient or necessary but not particularly in an area of interest. If they had been using a navigating or exploring strategy they most likely would not have had these experiences. Lindsey explained how she discovered her interest in human resources:

After I started the programme for working with people who were visually impaired and decided it wasn't for me I had to stay in the same community where the college was because I had an apartment lease. So I had to find a job and I was kind of stuck there. So I ended up working for a couple of temp agencies and they put me into a few HR roles, which were more like interviewing and a lot of health and safety things and just kind of worked with them and caught them up on filing which is not the exciting part. But it was just nice to be in that atmosphere and I found a really good connection with the team there. So I was there for probably about six or seven

months and the contract just ran out because it was a temp agency. So they were like: “You have to go to school, you’d be great at this” and they just kind of pushed me towards that.

While drifting opened the door to serendipitous encounters, it posed dangers for participants who made use of it for extended periods of time. A few participants in their late twenties had obtained little in the way of credentials or marketable skills a decade after they had graduated from secondary school. It was like that for Adrian. After graduating from secondary school, he worked in a series of jobs that paid poorly and offered little in the way of skill development. For the past three years he worked at a car dealership doing small repairs and cleaning. Because he had no formal mechanic credentials, he was unable to advance his career prospects.

Settling

Those who demonstrated a pattern of tolerance for whatever careers they had were characterised as settlers. Participants who used a settling strategy had found a career-related place that they did not particularly like but, for a variety of reasons, planned to stay. A decade after graduating, some participants were settling, having attached themselves to occupations or lifestyles that fulfilled their need for a place, but which they described as only being moderately satisfying. The source of their dissatisfaction may have related to the work itself, poor pay, or lack of potential for advancement.

Meg’s experience epitomised the utilisation of a settling strategy. She was 24 years old and worked as a labourer in a furniture factory at the time she was interviewed. After secondary school, she obtained a diploma in business administration from a polytechnic, but was only able to find a job as a retail clerk. Her chance for advancement floundered when the store underwent a change in management:

I was working at a department store and they asked me if I wanted the opportunity to work as a supervisor or assistant supervisor. A couple of weeks after they asked me, new management came in and stopped all the training and said they wanted to focus on getting the store up to where it was supposed to be.

Frustrated by that experience, she left her job. Meg had difficulty finding a job in the business administration field which she attributed to employers unwillingness to hire people without experience. She eventually took a job in a furniture factory because it was close to her new home and the pay was better than for the other jobs that were available to her:

The job I was at, they weren't paying enough and my boyfriend and I had just gotten the house. It was like everything all at once: they paid a lot more and it was closer to where we were moving. So it was just convenience. At the time it was like, how am I supposed to say "no"?

Meg felt underemployed and frustrated working at the factory, but planned to stay because her salary was necessary to pay the mortgage for the house she had recently purchased with her boyfriend. In addition, the relatively good remuneration allowed them to consider starting a family:

This job, yeah, it's not just me I'm thinking about now. I have to think about my boyfriend and we want to start a family. So it's not just me; it's somebody else too. But we've both made sacrifices.

Consequences of settling. There were varied reactions amongst participants who used a settling strategy. It was quite demoralising for some to have spent a great deal of money and time only to find themselves in a career-related place that was not satisfying. Taylor described what it was like having to settle because she could not find work in her chosen field:

When you're in university you have this sense of purpose all the time, you're working towards this goal and then when I got out of university and my dream job fell through and I was just working a menial job that meant absolutely nothing to me and was going to take me nowhere near my goals, that was difficult and it still

is. To work with no actual purpose other than to pay my rent and keep me clothed and fed. That's difficult.

Participants who had settled for jobs that provided job security and good pay were often satisfied with the trade-off, particularly if they had family responsibilities. Maggie who had recently married said she was content with leaving a fast-paced and satisfying job for a more secure but less challenging one:

I wanted to be able to spend time with my husband and he's new to the country and I just thought, if I'm always stressed about work and don't have time and coming home every night late, like that's no fun ... If I was single I think this job would bore me out of my mind but now I have a lot of other things in my life going. I hate to even be complaining about it because compared to what I was doing, it's like amazing and there are so many benefits. In terms of days off, overtime, vacation, I can't ask for anything more. But day in and day out I hoped there would be room to like advance or to take on more things.

Participants' varied reactions to settling may have related to their work orientation. Work orientation refers to whether a person considers their work to be a job, a career, or a calling (Wrzesniewski et al., 1997). People who view their work as a job are primarily concerned about the wage they are earning, rather than the work itself. Those who view their work as a career value prestige, social status, and the power that comes with advancement in their careers. Individuals who see their work as a calling are less concerned about salary or status and more interested in finding jobs that are personally meaningful. Participants like Meg who viewed their work as a job stayed if it provided good pay and job security, even if they did not particularly like it. Participants who placed a premium on meaningful work seemed to face a more complex and circuitous transition. Like Kate who left a secure well-paying government job, participants seeking a vocation said they would not settle for work they did not find meaningful:

My big thing was, and still is, and it's going to be the death of me I swear, the never-ending quest for meaning in work. You know, I wanted to have something where a career meant getting out of bed in the morning, being excited to go to work and working hard, and feeling fulfilled doing that work.

I guess that quest for finding something that was meaningful someday was a bit of a motivating factor. I knew that there had to be something out there, which was what made me not want to settle for anything less. I think that's what kicked me into registering for the counselling programme. It was the case of: "this is something that I want to do, find that job that means something."

Some participants were torn between wanting job security and having meaningful work. They had a secure job that paid a good salary, but were unhappy because they were not satisfied with the work they were doing. They sometimes thought they should leave their jobs to follow their passion, but could not give up the security they had. Anthony shared the internal conflict he experienced:

I have an awful lot of security. That's part of the reason why I don't really feel that comfortable dropping all of this and going to get my degree in archaeology or get my Bachelor of Science and go on to marine biology or that type of stuff ... but every day I sit down and I look at what's going on in the papers. Recently when they made that discovery off the Atlantic Shelf here about three weeks ago, they sent an ROV down a couple of thousand feet for the first time and they found all of these new creatures and that and I definitely felt a pang of regret. It was like, you know what, I could have been out doing that research.

Committing

Participants who utilised a committing strategy had found a career-related place that was satisfying for them. They were generally happy with what they were doing and had no plans to change. Shawn who was a 29-year-old chartered accountant provided an example

of a participant who used a committing strategy. He had found work that was deeply satisfying:

I've been a chartered accountant for four years. Mostly my line of work involves auditing, but it can involve some taxation, other special work, dealing with clients. It's in a public firm so we deal extensively with the outside public. I really enjoy it. You don't see the same thing day after day. You don't know what you're going to be doing when you come in the morning. You have a bit of an idea, but it can change minute to minute. So I like that the most.

After graduating from secondary school, Shawn did not know that he wanted to be a chartered accountant. Rather than attend tertiary education like most of his friends, he elected to work and to take additional high school courses as way of clarifying his interests:

I kind of went a different route than other people coming out of high school. I wasn't entirely sure what I wanted to do and, for the first while, I was just working at a restaurant, basically to kill time and try to figure out what I did want to do.

After I graduated, I went back for another half semester and took another accounting and a calculus course because I liked maths. I was thinking maybe I'd see if that's really what I want to do. I excelled at it when I was in high school, so I figured that's what I might want to do. I used that as a diving board, just to see if that's what I really wanted to do.

Shawn decided to explore further his interest in accounting by taking a course at a polytechnic institution. The course allowed him to explore his interest in accounting both through doing course work and on-the-job training. His experience working with an accounting firm confirmed for him his interest in pursuing a career in accounting:

My brother had taken an accounting course at college and he had described what it was like to me. I thought maybe that was something I would like to try. I thought college would be a good option because it was low cost as compared to university.

As part of the college programme, they had on-the-job training. I went to a small accounting firm—just one guy and his secretary—and I was there to assist. I did my eight weeks and he asked me to come back again the next year. So I agreed and I went back every year from February until July, working full time during the busy season. After a few years, I got inspired and said: “I’m enjoying this, why don’t I go the whole way.” I decided I’m going to university with the goal of becoming a CA. That’s what led me to where I am now.

Consequences of committing. The main benefit for participants who used a committing strategy was that they enjoyed their work. This could be seen in Shawn’s narrative in the previous section in which he described how much he liked the variation in his work activities and the travel required (p. 129). Not surprisingly, participants who found their work meaningful were often willing to put in long hours. Jeremy recounted how his attitude toward work changed as a result of having passion for what he was doing:

I definitely put in a lot more overtime now because of the passion. If I have a problem that needs to be fixed, I will work six, seven hours of overtime. I’ve had weeks when I’ve had sixteen hours of overtime. Working at the hardware store, if somebody said: “Hey, you want to work overtime?” I would probably say no. I figured I put enough of my time into that. With what I do now, I freely give myself to it because I know I’m putting the extra time in and this is going to help this young person out. It will make somebody’s life better.

There were drawbacks to the long hours that many committers put into their work, particularly for those with family responsibilities. Several participants who employed a committing strategy acknowledged that it caused role conflict. Nick reported that he left a

job in an accounting firm for a less satisfying government job because of the stress it had caused in his family life:

My wife just had a newborn, he's a year old. I suspect we'll probably have two or three children. Right now I'd like to be home more than what the accounting firm could offer me. With the accounting firm, I'd go in most mornings for seven and if I got out of there at nine o'clock at night it was a good day. That was only for six months of the year, the other six months were terrific. I'd be working eight to four or eight to three, four days a week. It's just those six months were very hard on my wife. I wasn't around as much as I knew I should have been. So we had to prioritise what was important.

Another drawback for some who used a committing strategy was that it gave them a false sense of security. This was the case for Galen who had been working for five years as a materials manager for a large auto parts company and was in disbelief when he was laid off:

I'd worked hard for the company for five years and thought I'd found a career where I could stick with the same company and move up the ladder. I was totally stunned when they laid me off. I knew things were tough for the car companies but I never thought it would mean losing my job.

At times, particular actions of participants could not be categorised into one search (navigating, exploring, and drifting) or engagement (settling and committing) strategy. For example, some participants would proclaim a career pathway and engage in the training required to enter their chosen field. However, while they were navigating toward a particular goal, they were often exploring whether or not it fit with their evolving identity. They were in a sense both navigating and exploring at the same time. Similarly, participants sometimes used a settling strategy by taking an unsatisfying job while at the same time exploring other options.

Conclusion

The 47 young people who participated in this study were faced with the challenge of finding a career-related place after they graduated from secondary school. A key finding of the study related to the unpredictable and changeable nature of participants' career pathways. In particular, it identified search and engagement strategies that they used to find a career-related place. Despite having taken very different career pathways, there appeared to be commonality in their efforts to find a career-related place by utilising one or more strategies: navigating, exploring, drifting, settling, or committing. Through the use of the three search strategies (navigating, exploring, and drifting), they learned more about themselves and the career options open to them. While some found a career-related place by their early twenties, most needed more time. Participants who had found a career-related place differed in the way they thought about the place they had found. Those who used a settling strategy had found a place they did not particularly like but planned to stay for a variety of reason. Participants who utilised a committing strategy had found a career-related place that they were generally happy with and had no plans to change. It appeared that those who used a committing strategy had found work that fit their developing identity.

There were both potential negative and positive consequences for participants who utilised the various strategies. The potential negative consequences of navigating are particularly significant given that young people are often encouraged to use a navigating strategy in the immediate years after secondary school. Similarly, the benefits of exploring and drifting are notable given that young people are often discouraged from using these strategies.

The next chapter discusses the factors that influenced the strategies participants used. It also explores ways that these factors were related to changes in participants' strategy utilisation.

Chapter Six

Impact of Factors on Strategy Utilisation

Introduction

The previous chapter discussed the strategies that participants utilised when looking for a career-related place that emerged through the process of data analysis using grounded theory methods. In addition, the chapter discussed sub-categories related to the consequences of using the various strategies. Another set of sub-categories that emerged through the data analysis process pertained to the factors that impacted on the strategies used by participants. These factors will be discussed in the first section of this chapter. Following this, consideration is given to the ways that these factors related to shifts in participants' strategy utilisation.

Factors that Impacted on Strategy Utilisation

The challenge of finding a career-related place was achieved—more or less successfully—by utilising the five strategies identified in the previous chapter. Participants did not choose a strategy so much as one emerged from a convergence of factors related to their resources and the messages they received. Figure 6.1 provides an overview of the way that strategies were utilised by participants to find a career-related place (see next page). The figure also illustrates the influence of factors related to strategy utilisation. The six factors identified in the study were: knowing what they (the participants) want to do, messages about what they should do, resistance skills, tolerance for ambiguity, and the support and opportunities available to them. Many of these factors were influenced by a sub-set of factors. For example, the degree to which participants knew what they wanted to do was related to their self-awareness, exposure to a range of options, and the degree to which information and guidance from professionals was available. The six factors and their sub-set of factors interacted in idiosyncratic ways to influence the career-related search patterns of the participants. For the sake of clarity, the factors are discussed separately. In reality, they interacted with one another in complex and unpredictable ways.

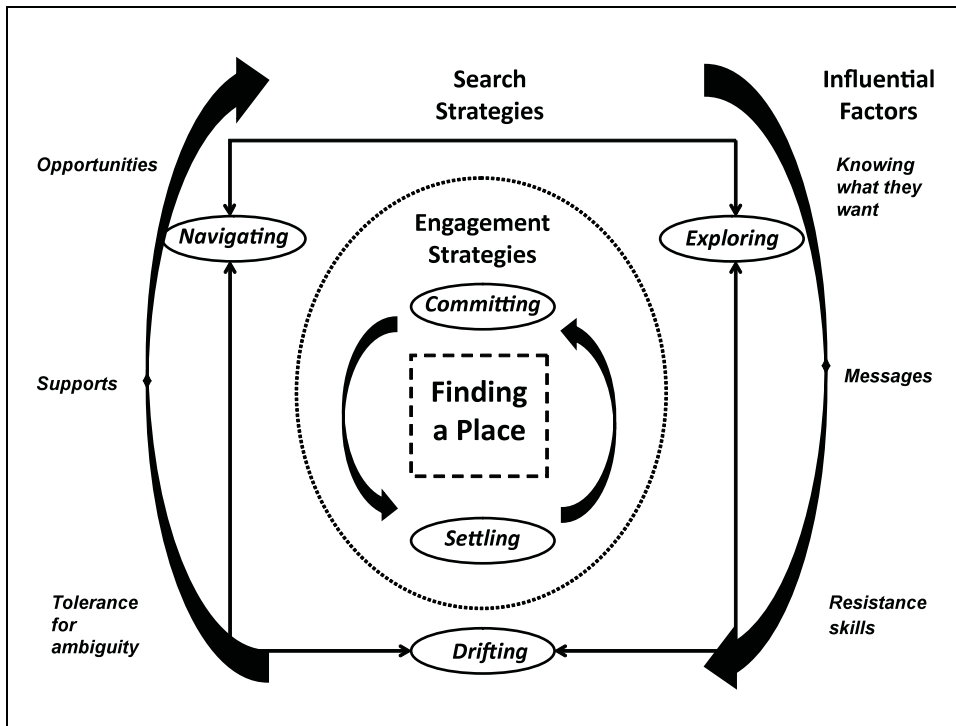


Figure 6.1: Typology of strategies utilised to find a career-related place

Knowing What They Want

Participants knew what they wanted to do to varying degrees. Some had clear ideas about what they wanted to do after secondary school while others did not. Ravi spoke about needing to take time out from university because he did not know what he wanted to do:

For me, it was just kind of figuring out what I wanted to do and what was important in my life. That's really important I think. I had never taken time to think about that stuff, ever. I never thought about it in high school. I never thought about it when I was in school and the only time I really thought about it was outside of school when I really wasn't doing too much. I was well: "What am I doing with my life, what do I want to do with my life?" Those are important questions but they do take time for people to figure out.

For some, knowing what they wanted to do was expressed through their desire to pursue a particular educational path or occupation. Nora, who was in the process of

completing a Masters degree in counselling psychology, said that she had known since secondary school that she wanted to be a psychologist:

I guess in high school is when I decided that I wanted a career in psychology and mainly it came from the fact that all of my friends came to me for advice and they were always telling me that I was good at it and I've always been a bit of a perfectionist, so I like doing things that I'm considered good at.

Others did not have specific career goals when they graduated from secondary school but wanted to pursue particular interests or skills. Lindsey described her sense of direction when she graduated from secondary school:

I wanted to have a family and be a mom for sure. I also knew that I wanted to have a career and I knew that I wanted it to involve helping people, working with people and something to do with medicine/health. Other than that, I really had no idea.

In some cases, participants proclaimed career goals that they knew little about. This was the case for Jake who went into software engineering because he liked computers and his father and sister were engineers. He admitted that the realities of working as a software engineer were completely different than he had expected.

A number of factors seemed to influence the degree to which participants knew what they wanted to do. These included self-awareness, exposure to a range of options, and information and guidance from professionals and non-professionals.

Self-awareness. Participants varied in the degree of awareness they had of their interests, values, and abilities. For most participants, self-awareness grew over time as they were exposed to a variety of education and work options. Participants who had a good sense of their interests, values, and/or abilities seemed to have better reference points for making decisions. They seemed more likely to navigate toward tertiary education programmes or jobs that they found satisfying. Additionally, it gave them direction in terms of exploring promising options.

Exposure to a range of options. Participants who successfully found a career-related place where they felt satisfied with their careers often spoke about a range of educational and occupational experiences to which they had been exposed. These experiences acted as catalysts that helped them figure out where their interests and abilities lay and, just as importantly, what they did not want to do. Exposure occurred in a number of ways including secondary school and/or tertiary education courses, work internships, paid employment, volunteer positions, extracurricular activities, and through contact with people who were engaged in a range of different activities. It also included being exposed vicariously when observing and listening to the experiences of family members and friends. Ben who owned a marketing business shared how he became aware of his interest in being an entrepreneur:

I've always liked business and I started out with an entrepreneurship class in high school. Through that class, one of our field trips was to a business enterprise centre. I love that place. The government had something that they called the Summer Company Programme. I went through that just to see if I would really like to get into business. I did it for the summer and I loved it, loved being my own boss.

Will planned to go into marketing after graduating from secondary school and enrolled in a Bachelor's degree programme in business. In the third year of his programme, he took a business policy and law course that peaked his interest in corporate law. Based on this experience, he decided to become a corporate lawyer. After being turned down for a clerkship with a corporate law firm, he went to work with a law firm that represented plaintiffs in class action law suits. As a result of this experience, he chose to become a class action lawyer.

Julie thought that she might be interested in pursuing a career in social work and tried out various aspects of the profession through volunteer work:

I started at the women's centre two years ago and I volunteered for the after school programme while I was in university. I started at the food bank in January and I've been volunteering with my research project since September as well. I chose things

purposefully that I was going to enjoy to do or thought I was going to enjoy to do. I wasn't sure I wanted to work with kids in the very beginning but now I love it and I want it to be a part of my life. And working with women has always been an interest of mine.

Kate who has now trained as a counsellor described the experience that changed her mind about pursuing veterinary medicine. She loved animals, but quickly realised that taking care of badly injured animals was not an interest of hers:

I had decided at a very young age that I was going to be a veterinarian. I worked for a vet for a while when I was in early high school and it was just a train wreck. It was a good way to determine I didn't want to do it.

An element of serendipity was present in the lives of many participants. Participants often said that the way they found out about the education programme or occupation they chose was through a friend or family member's casual comment. Alan found out about the field of public relations from a friend who happened to mention that she was thinking about going into the field. He had not known that such a field existed and was captivated as his friend described what she knew. Based on this, he did further research and eventually decided to pursue a career in public relations.

Some participants talked about "falling into a job" that ended up being what they wanted to do. Illustrative of this is Rachelle who is a pastry chef who graduated with a maths degree and was exposed to her chosen field while working as a stewardess on a yacht in the Mediterranean:

I like to cook and bake. I have a bit of an artistic side to me I certainly didn't utilise in my education. I've always liked the artistic side, especially cooking. There's a bit of a science to it as well. What happened was, the head chef was not getting along with anyone that they put in to be his second chef. Since I'd been working on board for eight months, they knew that I got along with him quite well. It was more

important to find someone to get along with him than it was to find somebody with the experience because he could train somebody. That's what I volunteered to do.

Socioeconomic status seemed to play a role in terms of what participants were exposed to while they matured. Those from middle-class families seemed more likely to have taken music lessons, been enrolled in sports programmes, travelled, and attended university than participants who grew up in working-class families. Growing up in a rural community also seemed to have limited the amount of exposure participants had to career-related experiences. In particular, some participants who attended small rural secondary schools noted that extracurricular activities and course selection were limited. Jordan reflected on how growing up in a rural community made a difference:

If I had grown up in Halifax, I think I'd have a broader view of opportunities because when you're living in PEI you look at things inside the box as far as what's available on PEI. You don't really look out into the world as far as opportunities. So when I was graduating from high school, it was kind of like: "Well the computer industry is just booming right now, I'm going to take that. I like computers, I'm really good on computers, I'll go for that and I'll try to get a career in computers." Whereas in Halifax there's just so many more things like social work or occupational therapy or things like that. I didn't even know what an occupational therapist was until my aunt got her degree in it. I was so naïve about things, about certain opportunities.

Information and guidance from professionals. Several participants indicated that they had chosen career paths when they entered tertiary education so did not access the career guidance services offered by their institutions. When their plans did not come to fruition after graduation, they were no longer able to access career guidance services or at least were not aware of how to do so. This was also true for participants who did not attend tertiary education programmes after secondary school.

The majority of participants recounted stories of making tertiary and occupational decisions knowing very little about their chosen paths or any alternatives. Few participants

received occupation-related information or career guidance from secondary school or tertiary counsellors. The minority who saw professionals were mixed in their assessments of whether the interventions were helpful. Julie spoke about her frustration with not getting help to determine what she wanted to do:

My guidance counsellor was zero help. I remember coming in to her and she gave me this career test and it was an online thing and I remember, I don't remember all of the things it said I should be but one of them was dolphin trainer and I just thought, how useless is this quiz that it tells me that I should be a dolphin trainer. I remember the things, and there was just a lack of information and she would sit down and be like, well what are your interests and you'd tell her and she'd be like, well have you thought with what you could do with those interests. Not necessarily giving options but asking you what the options are. Whereas, I don't know what the options are and that's why I'm coming to the guidance counsellor, you know.

And I found it a very frustrating experience and yes, I just, I don't know, it sticks out in my mind as being something that was almost hindering, as opposed to helping... Well, she was like, well what are your interests, well what can you do with those interests and what, out of those things that you could do, do you know you wouldn't want to do and so it was kind of, she wasn't laying out the options, I was laying them out and then I was chopping them down myself. As opposed to her being like, well you're interested in helping people, there's nursing, there's, instead of saying like, there's medicine, there's social work, there's education. Instead of saying all those things it was like, well what do you think? And I just found that very, I was very frustrated when I left. I remember going home and being like, well I don't have a clue what I want to do now and I thought I would have a better understanding after going to someone who should know.

Anthony reflected on his experience taking a career interest inventory that had been suggested by his guidance counsellor:

It said that I liked working with people and that I should be a fire fighter. That would have been great, but it's kind of stereotypical. Working with people: I could have been a team manager, I could have been a social worker, I could have been so many different things. But it went "ding, firefighter."

Most of the participants who found a counsellor's intervention helpful said that the counsellor helped them to connect their interests and skills to possible education and career choices. Galen described how his secondary school guidance counsellor helped him choose a career in materials management:

In my last year at high school I didn't really know what I wanted to do. I became interested in business and business administration and I can remember the moment I went in and saw my guidance counsellor. I went through some tests and my guidance counsellor was able to see the sort of things that I was interested in. She had a student the year before who had gone to this programme and the student said that they really liked the programme. It was a match with some of my interests and so she recommended it to me. I didn't just go ahead and jump into it. I went to a couple of the open houses at the college and got a feel for it. I was really interested and decided to pursue it.

Those who went to university sometimes talked to individual professors about future career goals. Not surprisingly, the information they received was most often limited to the professor's own subject area. The most common information they received related to graduate school. Participants who attended polytechnic programmes received more assistance from their instructors. Information tended to relate most to the types of employment prospects associated with the training they were taking.

Information and guidance from non-professionals. Participants cited non-professionals such as family members, friends, and employers as being beneficial sources of information, advice, and encouragement. Parents who had attended a polytechnic institution or university were able to provide their children with more guidance about tertiary

education than those who had not. Ravi recalled his mother helping him gather information and research education programmes: “I remember my mom getting the Dalhousie [University] calendar. She would read about different courses and really help me figure out what sounded cool, what sounded interesting to me.” In a number of cases, friends and older siblings were cited as important sources of information in regards to tertiary education programmes, occupations, and job opportunities. Occasionally, participants mentioned employers who had mentored them.

However, few received explicit guidance from non-professionals beyond: “Do what makes you happy.” Vanessa described the lack of guidance she received from her parents:

My parents were so intent on not biasing my opinion about where to go and what to do. They would always say: “Do what you’re interested in.” But I never really knew what I was interested in. They didn’t really help me explore that part of it. I would have appreciated a sit down and they would kind of help me explore the options. But my parents are older and when they went to school things were different and my dad’s a labour worker and my mother was a stay at home mom. So it was different I guess, maybe they didn’t know about the options.

Impact of knowing what they wanted on strategies utilised. Knowing what they wanted was an important factor in the strategies that participants used. Navigating and exploring tended to be used when participants knew what career they wanted to pursue and when external factors did not impede their pursuit of this pathway. For example, in order to navigate or explore participants also needed supportive messages or the resistance skills to ignore critical ones. They may have also required financial support and have the desired opportunities available to them. Andy, who was a professional musician, described how knowing what he wanted allowed him to navigate directly to his chosen field:

As soon as I realised music was my thing you know, I had no other option. It just wouldn’t make sense to do anything else to me. I couldn’t imagine doing anything else. I figured that out in grade eleven. Maybe even grade ten. It kind of developed really naturally because it was already such a big part of my life before that but then

just to realise well it's when I started thinking about university, that's when it really came together really well because then I was like: "Oh of course I'm taking music." So I was like right, that probably means what I'm going to do, I'm a musician, you know, there's no other option.... I did what I wanted to do. That was one lucky thing that I had that very few of my close friends from high school had. Actually knowing what I wanted to do.

All of the participants in the study who utilised the exploring strategy had at least some sense of their interests, values, or skills that acted as a reference point. Hannah became aware of her interest in human rights and international development through volunteer work she did in secondary school. This acted as a reference point for her deciding to participate in an international exchange programme after graduating from secondary school:

It was an educational exchange programme, so a lot of the focus was around cross-cultural learning, community development, leadership development, and that kind of stuff. I was just manifesting all of those desires and passions and skills. I think that first step was what led to the next thing and led to the next thing. Here I am now, with a great job working with youth from cross-cultural backgrounds.

Emma described utilising an exploring strategy rather than a navigating strategy because, despite being clear about her interests, she was unsure specifically what she wanted to do:

I didn't want to go to grad school or apply to grad school because I was just so unsure. I was working so hard at writing and then I was wondering like well do I still want to go to back to school. That's originally what I wanted to do. That's why I took all those science classes and that's why I took my minor in medicine. I couldn't even tell any more because I was so focussed on writing and I wanted to take time off to figure that out. I was afraid that if I went to grad school, even if I wanted to do like a creative writing programme, which isn't necessary but people

do that and it could be really nice, especially after I went to Edinburgh and I saw what that was like. But I was like I don't want to just continue doing this because it's what I'm doing, like I want to step back and reflect and think are there other things that I should be doing?

Participants who were uncertain about their interests and abilities were inclined to use a drifting strategy. Some drifted from one experience to another as a way of learning more about themselves. Vanessa explained that her lack of self-awareness left her to drift when her long-standing plan to go into medicine did not materialise because she was not accepted into medical school:

I think for someone who is in their early twenties, this was like way too much, too fast and therefore, my counter-approach to all of this was to work in industries like the restaurant industry and working at department stores because it was like this whole breath of fresh air, like people do this? People just go out there and work at Eaton's and I can do this? I felt like somehow I was gaining control of discovering who I was if that makes any sense. Like trying to figure more out about me.

Not knowing what they wanted to do contributed to settling for some. They had not been able to find an occupation they liked so continued in a job that was less than satisfying. Elizabeth shared the experience of a friend who was using a settling strategy:

I have a friend who took a communications certificate and is doing PR work for a big company. She doesn't hate it but doesn't really like it either. I think she's staying because she's not sure what else she wants to do.

Those who knew what they wanted to do were more likely to employ a committing rather than a settling strategy. Anthony, who said that he had fallen into a job as a dental technologist wondered whether it was the right choice even though he found the work satisfying:

I like what I do and to an extent I do get a very good satisfaction feeling about it and I do love it to an extent but it's not what I want to be doing for the rest of my life... I know I will also enjoy, love and cherish the idea of being able to become an oceanographer or a geologist or that type of thing but for now it's just going to be off to the side. If I see a road that goes down that way and I know I can keep doing what I'm doing, I might be tempted to go down that road.

Messages

Participants were bombarded with strong messages—both spoken and implied—about what was acceptable and expected in their education and career choices. Without the benefit of knowing what they wanted or the support to follow their interests, many went along with the messages they heard.

Go to tertiary education. The most common message that participants heard after graduating from secondary school was that they were expected to continue their studies at a tertiary institution. Even those who had not attended felt that they should at some point. Many participants said that attending tertiary education was not their choice, but rather something others assumed they would do. Moreover, it was implied that university was a superior choice to polytechnic institutions and that, if they were capable, students should choose university over polytechnic. Will explained what was expected of him upon graduating from secondary school:

University and college²⁴ are sort of the two things that people push because what we value is post secondary education. So I think there's this mentality that you should go do college or university. If you're smart enough you should go to university and so that's how it was kind of presented. If not, you should go to college to learn a skill and then there's sort of this terrible shame of not doing neither and just working. Like there's sort of this idea that that was not acceptable or that you should be striving for more. So I think it would take a lot of courage to not do either of those, and even to take a year off.

²⁴ In Canada, polytechnic institutions are referred to as colleges.

It's worthwhile noting, that this expectation was less prevalent among participants whose parents did not attend tertiary education themselves and among participants who had not done well academically in secondary school.

Several reported that part of the reason that they attended tertiary programmes was the lack of alternatives. Rachelle indicated that when she was in her last year of secondary school "it felt to me like my choices were to go to university or work at McDonalds."

You need to have a plan. Many participants reported that there was a great deal of pressure to have a plan after secondary school. For most, going to tertiary education stood as a proxy for having a plan. A number said that they wanted to take some time off after secondary school but were strongly discouraged from doing so. For some, attending a tertiary institution was viewed as a time to explore their options and they were given the message that they "would figure it out". While they were given latitude to explore within the confines of a tertiary institution, many were given the message that it was time to make up their minds once they graduated. As Jeff said:

You have that huge explorative phase when you're in university, if you do go to university, and you want to get out and live life and then after university people start asking you, well what are you going to do, what are you going to do, what are you going to do and then I think that just puts pressure on people to quickly decide or maybe not get to know themselves well enough to make an informative decision. That, this is a decision based on my future happiness, not just a decision based on "I have to make a choice and I've got to make it sooner than later."

Changing your mind is not a good thing to do. Some participants found it difficult to change their minds and felt that they should complete whatever tertiary programmes that they had started whether they liked what they were doing or not. This was the case for Chris who said:

I felt that when I went to university that you had to pick something so I picked computer science. And then when I had doubts about it, I thought: "Well, I'm

already so far how can I start over again.” Even when I was going to grad school in computer science, I thought maybe I want to do something else but it just always seemed so difficult to change once you were committed. It may have been completely in my head but it, never felt that easy.

Those who were able to change their plans often did not find it easy to do so. A common strategy was to develop another plan prior to telling their parents. This strategy was utilised by Meg when she realised soon after starting an early childhood programme that she did not like it:

When I started the early childhood programme and was thinking that this is not the right fit for me, I thought like: “Crap, why did I make this decision and what do I do? Do I finish the programme? Do I drop out of the programme?” And then when the job opportunity came up, it was like okay, sure I can drop out of the programme and that will be okay with my parents.

Some choices are better than others. Participants also heard strong messages about their career choices. Many heard that they should have “good” jobs and “stable” jobs. Parents who were professionals themselves often expected their children to go into a profession. Jake said that the only options that were acceptable to his parents were being a doctor, lawyer, or engineer. Some said they were discouraged from entering occupations that were not considered “white collar.” Adam shared his experience of wanting to pursue an occupation that was not acceptable to those around him:

I told my mother I wanted to be a mechanic when I was in grade 8 or grade 9 and she cried. They were always telling me that I was smart enough that I should, instead of being a mechanic I should be a mechanical engineer or something. Like principals and guidance counsellors were always saying: “Oh you’re too smart to be a mechanic.”

While some felt that they could pursue the tertiary programme of their choice, others said that their choices of tertiary programmes were limited. Their parents had strong opinions about programmes that were worthwhile and those that were not. Julie recounted why she enrolled in a business programme while her interest lay in more creative pursuits:

In high school I wanted to go to interior design school or into fashion design or something like that. I felt I was more artsy than academic and that's where I wanted to go and my parents said: "Absolutely not! After high school you go to university." There was no discussion there, there was no leeway, it was: "What university are you applying to?" On the application it was Bachelor of Arts degree, business, or science and I remember my mother saying: "You're not getting an arts degree, you'll never go anywhere with an arts degree, I refuse to help you pay for school if you're going to do an arts degree." So I was like: "Well I can't do science, so I chose business" but it really was the eeny-meeny-miney-moe. I didn't have any strong feelings towards wanting to take a business degree.

Parents who were not professionals seemed to be more accepting of children making career choices that did not have as much status. Jason, whose father was a factory worker, said his parents "never directed him in any way whatsoever from high school." While his parents were fine with him going to university, they were equally satisfied with him being a factory worker:

[My parents said] "It doesn't matter what you're going to do. You can come to work in the factory after high school and if that's the best you can do for now or it ends up being the best you can do, then that's fine." There was never any push from either one of my parents. They were always good like that, they supported me I guess but never really pushed me.

Many participants from a range of socio-economic backgrounds said that they were encouraged to choose a career that was "stable" and provided "security". Some reported that while their parents wanted them to have a stable job, they also encouraged them to find an

occupation that they enjoyed. This led to mixed messages in which some were encouraged to do what they wanted as long as they had “security.” Torin shared his story:

There’s pressure put on me to find something stable, which medicine offers, which engineering offers. That kind of pressure has definitely influenced me to pick these kinds of stable careers. I’ve kind of rejected it and accepted it and gone back and forth with that. So yeah, I’m definitely struggling with how to balance finding my passion, which they’ve always been very supportive of and I’ve had a few kind of arguments about like: “You guys have always said, you know, that you’ll support me with whatever I choose, as long as I’m, you know, I enjoy it or I’m following my heart kind of thing.” So that doesn’t always necessarily jive with the whole being in a profession that’s stable.

Young people who wanted to pursue a career in the arts seemed to take the brunt of parents’ (and society’s) scepticism or outright disapproval. Sophie, an aspiring musician put it bluntly: “people love music, but they hate musicians.” She also indicated that people rarely said anything to her directly but rather that the criticism was implied:

There’s always an underlying question with a lot of people, like: “Why don’t you get a real job, why don’t you go back to school or why don’t you, you know settle down somewhere and stop doing what you’re doing.”

Despite the criticism, Sophie persisted in pursuing a career as a musician; however, she often experienced doubt about whether or not what she was doing was the right thing. She noted that it was a constant struggle to convince herself that being a musician was a worthwhile thing to do. Every few months she would feel that she should be doing something more “productive.”

While most of the young people in the study were applauded for pursuing a profession and criticised for choosing a career in the arts, there were exceptions. Andy said that his parents were “not at all concerned” about his choice to be a musician while Will was criticised for his decision to pursue a career in law:

I hate to pick on my dad, but the fact that he hates lawyers always comes out. He's like: "You don't want to be a lawyer, do you?" That just didn't help. I was almost ashamed to tell him that I wanted to go to law school.

Impact of messages on strategies utilised. The messages that participants heard influenced which strategies they utilised. Navigating purposefully towards an acceptable tertiary education programme and/or a career choice was the strategy that emerged for many immediately after graduating from secondary school. This strategy was encouraged and sometimes forced on participants. As Scott said:

I didn't know what I wanted to do and I was really pushed to not take a year off and decide what I wanted to do. I was really pushed to go and get an education and just keep going and going and test out the waters. So I went to community college just because financially that's what I could afford at the time.

A number of participants either enrolled in post-graduate programmes immediately after completing an undergraduate degree or took jobs not because they were interested in the occupation but because they did not know what they wanted to do and felt pressure to have an answer.²⁵ Rachelle spoke about the stress she experienced immediately after graduating from university to come up with an answer:

The pressure to know what you're going to do with the rest of your life is pretty great. That's the one question that everyone kept asking me. I found that to be almost debilitating because I didn't know and everyone kept asking. I pretty much took the first job that I was offered because I thought, if I had a job, then that would be the answer. I wouldn't have to answer what I wanted to do with my life.

²⁵ In Canada, many professional programmes such as medicine and law require an undergraduate degree for admission. Others do not require an undergraduate degree but generally one is necessary in order to have a competitive application.

The messages that young people hear can make it difficult to utilise an exploring strategy, particularly outside the confines of tertiary education. A number of participants spoke of being criticised for employing an exploring strategy after graduating from a tertiary institution. Illustrative of this is the experience of Emma. After finishing her Bachelor of Arts degree, she felt pressured to continue with a professional or graduate programme, but she was unsure so decided to take a time out. Here she describes how her friends and family reacted to her taking time to explore her options:

I was literally having people call me and say: "You need to leave, you're wasting your time, I always thought that you would amount to something." Like friends say this to me. My parents at first, [said]: "You're living with us and you don't have any money, it's okay. You worked really hard and you did well in school so it's okay. Don't worry about it." But that turned into: "When are you going to pull it together and go back to school?" My dad, especially, was pretty disappointed when I didn't write the LSATs.²⁶ They're very supportive but, at the same time, they want me to do well. And I think they were very worried that I would suddenly do nothing with my life. So there was a push there: my dad's very much: "You should have a professional degree."

Emma resisted these powerful messages and took the time to engage in career counselling and took a portfolio course that helped her realise that the publishing industry would be a good fit. Many participants were not able to resist such messages and refrained from exploring in favour of navigating toward something that aligned with others' views of what they should do but which they knew little about or which held little interest for them.

Messages about what constituted an acceptable occupation circumscribed the education and career pathways that some participants could explore. Some were in a bind because, as Chris said: "The things I was naturally interested in weren't okay. The things that were okay didn't interest me." Antoine noted that he was interested in technical things but as someone who was labelled as being gifted academically he was not: "given the

²⁶ LSAT stands for Law School Admission Test. It is required for admission to law schools in many countries including Canada.

opportunity to explore the technical end of things because others thought that would have been a waste of my talents.”

Drifting was a strategy that was particularly discouraged. This manifested itself in the resistance that many participants encountered when they wanted to take a time out to work either before or during their tertiary studies. Most were not able to resist messages about taking time out so some drifted into a tertiary programme instead. The pressure to go to tertiary education seemed to be one of the reasons that young people took polytechnic and university programmes that held little if any interest. Mike said that a number of students in his golf management programme were drifting:

There were probably six people that their parents just shoved them in there because they needed to go to school. They dropped out, they didn't care, they didn't get good grades. They had no idea what they wanted to do, and their parents made them choose something.

A mismatch between a young person's aspirations and the messages they received was part of the reason some participants in the study were drifting. They did not receive support for what they wanted to do so they haphazardly tried other things. Jeff spent three years vacillating between pursuing a music career and going into a trade as his mother wished:

I applied to go to the community college, like two or three times. I got in, but I didn't go because I didn't want to go. The reason I was applying, I didn't know it at the time, but it was to pacify my mother because she wanted to see me do something.

The messages participants received were also part of the reason some employed settling as a coping strategy. Once they started navigating toward a particular career option by taking an occupationally specific programme, there was sometimes pressure to “just finish it off” whether they liked it or not. As a result, several graduated with a credential to

enter an occupation that held little interest. This combined with the pressure to have a plan led some to settle. Andy said:

Unfortunately, I know too many people that went to university to become a nurse or to become a biologist or whatever and they get out and they realise: "I really hate this." I'm thinking of one individual, she finished her nursing degree and she said by the time she realised she did not like that profession, she was in her third year and she felt that she had to finish it and she's currently a nurse and she hates every day of it.

For some, settling was a response to the importance of having a secure, stable job. Scott indicated that financial security was his primary consideration:

I don't dislike my work, but I wouldn't say I enjoy it. It's something I do. I guess there are people who take a lot of enjoyment out of what they do for a living. For me, this is a means to live my life the way I want to. It allows me to be comfortable financially, to pursue my hobbies, diving, volleyball, things I want to do outside of work. And it allows me to just be financially secure.

Messages to make up their minds increased as they moved into their mid-twenties and beyond. By the time they were 25 or in some cases 30, they thought that they should have made decisions regarding their careers. This was particularly true for those who were involved in significant relationships and/or having children. Whether they had found something that fit for them or not many thought it was time to have a career. As Lyle put it:

I think a lot of people feel pressured to start something by the time they're 30. I think it's a big number for a lot of people, that by the time I'm 30 they should be doing something to, you know, that is a career, that they're settled in, that they're living in a spot where they can start a family life and can do this and I think a lot of people want to settle based on sort of a societal pressure.

For participants who employed a committing strategy, there was often congruence between what they wanted and what others expected of them. They were supported for the choices they made and enjoyed what they were doing. Shawn, a chartered accountant (CA) who loved what he did, admitted that he was not sure if he could have done what he wanted if those around him had not supported him:

I'm actually wondering how well I would have coped if I was made to be a carpenter. I could see myself actually going down that stream as well too because I kind of got the pressure to be a CA ... I would like to say to myself that I would do what I wanted but I don't know if that would be the case.

Resistance Skills

The concept of resistance skills has been borrowed from the positive youth development literature which uses the term to refer to a young person's ability to resist negative patterns of behaviour—such as drug abuse or delinquency—in order to fit in with a peer group (Benson, 2003). In the context of this study, resistance skills are defined as a young person's ability to deflect or counteract the expectations of others (peers, parents, and community) when the wishes of others are in conflict with what the person him- or herself wants to do.

The resistance skills needed largely depended on the messages a particular participant received and how well they fit with what the participant wanted to do. Some participants were confined to a narrow band of acceptable options. Others were supported by those around them to do whatever they chose. Ravi, who had a full scholarship but left university after his first semester, said that his parents were “behind him” and “they support me in whatever I do.”

Participants varied in their abilities to resist the expectations of others. Some resisted the expectations of others and pursued options they thought would be personally satisfying. Others did what was expected of them. A minority were able to resist the expectations of significant others in their late-teens, while for others, resistance skills grew as they progressed through their twenties. Lyle explained how he, like most people he knew, went to university because that was what was expected of him:

I feel like a bunch of people just go to university. It's not really their decision to go. They can say no, but the majority of people won't. I didn't. None of my friends did. Your parents want you to go, so you just do it. You're only like seventeen, eighteen, you're still a kid. You don't even know if you know how to say "no" to your parents.

Kate, who was an aspiring actress in her early twenties, said that she was told repeatedly by her in-laws to find a "real job." She eventually complied and spent two "miserable" years working as an administrative assistant with the government. Amid the criticism, she came to believe herself that being an actress was not a good thing to be. Here, she described how her resistance skills grew over time:

Eventually when I started mirroring to me their little comments like: "You know, university's very hard" or "Perhaps you want to sell candlelight products for the rest of your life" or "Doing office administration work is the be all and end all kind of thing," I realised that they were insane, from my perspective. Eventually it's like: "You guys are just weird." A little voice in me started to grow: "These people don't have it all together. They don't know what the hell they're doing either. Everyone's making it up. So I might as well make it up in a way that is going to honour certain drives and needs that were in me."

One of the most common strategies participants used to resist others' messages was to control the flow of information. They often changed their plans without telling others and only told them once an alternative plan was in place. Another common strategy was to enlist the support of family members, friends, and others who supported them in pursuing their desired plans.

Impact of resistance skills on strategies utilised. The ability to resist the expectations of others was critical for participants whose goals were not compatible with those of significant others. It increased the chances that they would navigate toward their desired path in spite of criticism. Dylan, who was a successful hair stylist, said that being a

stylist was his dream when he graduated from secondary school. However, his parents wanted him to go to university. He completed his undergraduate degree to pacify his parents, but was able to resist their expectations that he continue on to take a Masters degree in public administration:

My father was a foreman; he didn't want me having a trade. He wanted me to have an education and Masters programme. The scariest thing ever was going against my parents' wishes. I think I whispered to my aunt, this is what I wanted to do, and she encouraged me. Then she got hold of my older sister and we were able to keep it low and not tell anyone. I wasn't happy for four years at university. I felt like I was treading water and not going anywhere. But, as soon as I was done university and was able to take a course that I wanted to take, that was the best part.

Dylan did not initially have the resistance skills to follow his preferred path. The growth of those skills over time allowed him to navigate towards a career as a hair stylist and eventually commit to it. When asked where he might be if he had not been able to resist his parents' expectations, Dylan indicated that he likely would have settled for a career as a government civil servant: "I would have been in Ottawa somewhere, probably pushing papers and having a boring life."

Some opted for settling because they were not able to resist the messages that they should continue with what they were doing. Jenna explained why she stayed in a job she did not like for two years:

One reason why I stayed longer was that my parents were really excited about this job. They were saying: "You could stay there for life. You could make this a career. You could move up." But I knew that it wasn't for me and I would hate my life.

Resistance skills were often needed by participants in order for them to employ exploring or drifting strategies, particularly when they occurred outside of tertiary education. Participants who used these strategies were often criticised for misusing their time. Resistance skills were also often necessary for participants who wanted to change

course. It gave some the courage to leave education programmes that didn't fit even when other people were encouraging them to "just finish" and others to leave "good jobs" when they were being pressured to stay. Lindsey described her experience of leaving a human service programme after realising it did not fit:

I knew myself it didn't fit and I didn't want to stay but it was hard telling my parents that and like telling people around me: "Okay, I'm quitting." They're like: "No, just finish it's only a year, just do it." But I was like, if I'm stuck in here for a year, it's not going to make me happy and if I hadn't left I wouldn't have done the HR jobs and I wouldn't probably have went the other way. So I think it worked out personally but definitely then, it was like okay, if I quit then I'm a failure to my parents or if I stay then I'm going to be unhappy. So it was definitely a good choice but it was a hard choice, for sure.

Tolerance for Ambiguity

Whatever strategy participants utilised, there were often many alterations to their career pathway as they engaged in the process of finding a career-related place. As a result, most participants experienced at least some uncertainty about their career pathways during the school-to-work transition. Scott described the uncertainty he had experienced since graduating from secondary school:

Uncertainty and I are close friends. I was so uncertain for three years. Uncertain that what I was doing was the right thing, uncertain that I could make it work, uncertain if I tried something else would I fail and would I end up back where I was or uncertain I was going to be able to pay the bills on time. You know, character building but definitely not very comfortable.

Some participants were comfortable with this ambiguity, while others were not. Those who were able to tolerate uncertainty were typically optimistic about their future. Carol typified this confidence when she said that whatever happened, she had faith that the future "will take her somewhere great." Participants' optimism often seemed to be

connected to trusting their feelings or something outside of themselves. When Emma moved home to weigh her options rather than go to graduate school, she was sure it was the right thing to do despite having no idea what she would do: “I really trust my intuition about things. I feel like I should be living here for some reason. I can’t tell you why, but I feel like something is going to happen here.”

Andy noted that his meditation practice helped him work with the “fundamental groundlessness of my situation.” Others felt that there was someone or something guiding them. For some, they felt that this guidance came from God, while others were not specific about what they thought the source was. Lindsey said:

It’s just like one thing led to the next. There’s been periods of time where I have felt very confused and have no idea where I’m going. Then all of a sudden something comes to me. It feels like there’s somebody just handing things to me.

Participants’ tolerance for ambiguity impacted on their comfort level with staying in what they perceived to be uncertain situations. Those who were not as comfortable with uncertainty seemed to be more inclined to rush into taking an education programme or job. Some took graduate or professional degrees that they were not particularly interested in because it alleviated their uncertainty. Nora said that her plan had been to do a Masters degree in clinical psychology immediately after her undergraduate work. She was not accepted to the programme and was so uncomfortable with uncertainty that the following year she applied to four different psychology programmes, including one in experimental psychology that held no interest for her. When asked if she would have taken that programme had she not been accepted into a clinical programme, she said: “After not getting into a grad programme the first time, there was no way I was taking the chance of not being in school. Getting into any programme was better than not being in school.”

Participants who had a higher tolerance for ambiguity appeared to be able to take what a participant referred to as the “leap of faith” that is often necessary to leave a tertiary education programme or a job that does not fit. Jeremy described how he changed his university major:

When I decided that religious studies was the thing that I wanted to do rather than chemistry, there was a big question for me about security. Do I take chemistry where I know I'm going to have security? Or do I take this path of the unknown, insecurity, not knowing what I'm going to do? That's when I made that decision that following what I want to do is more important than security.

Several participants said that their tolerance for ambiguity grew over time. Torin recounted how his comfort with uncertainty changed:

I thought I knew what I wanted to do and then things fell apart and I wondered what to do. Then, I found something else to do and it fell apart too. Over time, I've become more comfortable with uncertainty. Experience has taught me that something will fall into my lap. So I think okay, I'll take things as they come and the past couple of years they've come and gone and things have worked out without a plan.

Impact of tolerance for ambiguity on strategies utilised. A tolerance for ambiguity helped some participants navigate toward careers that were uncertain, such as being an entrepreneur or an artist. For others, discomfort with ambiguity forced them to adhere closely to a career path, settling for whatever happened. Nora shared the impact of her discomfort with uncertainty on her career path:

I never thought of like something that would be out of the box because being a doctor or lawyer is a good career. Like your standard careers. There's job security in that. There's all these things that I'm interested in. I would love to be a wedding planner but things like starting a business, most small businesses fail and just like how do you start that? How do you become one? Like that kind of thing would have scared me. I had to be in the box. Like there's a career for what I want. Once I have my education I can do my job. I will need to get more practical experience but I don't need to figure out how to become a psychologist, there's degrees out there.

Participants with low tolerance for ambiguity were more likely to continue navigating toward something even after learning that it was not a good fit, or find another closely related career option to navigate toward before giving up their original plan. A tolerance for ambiguity seemed to facilitate exploring. This is not surprising given that exploring is inherently uncertain. Those who were not comfortable with uncertainty were more likely to employ a navigation strategy even if they knew little about the option they had chosen. Torin, who had recently found out that he had not been accepted to medical school, said that he was going to spend time exploring other avenues that would allow him to work in his area of interest, but not limit him to just being a doctor. He noted that if he had been in the same situation a few years previously his low tolerance for ambiguity would have left him “desperately searching for a career” and unable to explore his options fully.

A few participants cited their discomfort with uncertainty as a reason for employing a settling strategy. Some participants made use of drifting when they could not tolerate the possibility of making the wrong decision or not being accepted into their programme of choice. Stacey reflected on how she ended up employing a drifting strategy after secondary school:

I remember graduating and thinking: “I don’t want to deal with school.” Work was a way of being lazy because all you’ve got to do is show up, do your job, and go home. There’s nothing stressful or uncertain about it, whereas applying to school and making choices about your future, it’s scary. So, I was like, I’m going to work this stupid job and see what happens, until it drives me nuts and then I’ll go to the next thing.

Support

Another set of factors that impacted on the strategies utilised by participants related to the emotional and financial supports that were available to them. Some participants’ families were able to pay for all or most of their children’s education, but many families were not in positions to help financially. In many cases, participants paid most, if not all, of the costs by working and/or taking out student loans. Most reported having no difficulty accessing government student loans to attend tertiary education.

The availability of financial support skewed career paths in several ways. A number of participants opted not to attend tertiary education because of the debt they would accumulate. Others deferred tertiary education until they could save enough to pay for their programmes. Those who financed their own education usually worked while studying, sometimes holding down two or three jobs at the same time. Carrying a full course load and working resulted in lower grade point averages for some participants which, in turn, limited their ability to gain entry into graduate and professional programmes.

Participants cited non-professionals such as family members, friends, professors, and employers as being beneficial sources of emotional support. Many participants said they received strong encouragement and emotional support from their families, partners, friends, and employers. Several participants said that self-help and “positive mindset” books were important sources of motivation and support. Elizabeth recounted how having emotional support from a variety of sources helped her through university:

When I came into first year, it was very discouraging because my marks were low and it was a lot harder to be motivated when you're doing so much worse than you did in high school. I had a talk with my parents one day and they said: “Listen, it's normal that that happens but you have to understand that.” So they kind of gave me a pep talk and said I need to give it more time: “You can't give up so early on and of course it's going to be different from high school. There's a lot of changes, etc, etc.”

I don't really know how it happened but I decided you know what, they're right, I'm going to try harder. There's much more I could be doing. I could probably study more if I organise my time better and I did that and first year ended up turning out a lot better than it had started. So that was motivating, the fact that I knew that I had it in me to do it. So that motivated me to continue doing it for second, third, and fourth year. It was a lot of internal motivation but definitely a lot of external motivation. My older brother, who is three years older than me, was also a big help. So a lot of times I came to him for advice because he had already been through the university process and the transition and so he was a lot of help.

Participants' reports of having received a great deal of emotional support from their parents seemed at times to contradict their experiences of having their parents threaten to withdraw financial and emotional support if they followed a career pathway that was not considered desirable by their parents. Emma's experience of the conditional nature of her parents' support was not unusual:

I was very interested in photography. I used to sneak over to NSCAD [Nova Scotia College of Art and Design] and use the dark room when I was in high school and I'd take classes at NSCAD when I was in high school. I was very much interested in going to NSCAD but my dad said that he would pay for it if I went to McGill (to take pre-medicine), he said he wouldn't pay if I went to NSCAD so that sort of helped shape my decision to go to McGill.

Participants who reported a lack of emotional support reported lower self-confidence and a lack of motivation to pursue tertiary education. A graphic example of this was provided by Maggie who reported that she had been physically and emotionally bullied throughout her time in primary and secondary school. At the time she graduated from secondary school, she noted that her self confidence was so low and her marks so poor that "I didn't feel capable of doing anything." A few participants sought out help from counsellors to deal with the stress of attending tertiary education or other emotionally disturbing events in their lives.

Impact of support on strategies utilised. Some participants who had no choice but to take on large student loans in order to attend tertiary education delayed going into tertiary education or did not go at all. Due to a lack of financial support, several participants drifted into the workforce when their preferred strategy was to either navigate toward a particular occupation or explore an area of interest by going to college or university. Anthony, who had a long-standing interest in geology and archaeology, explained why he worked in a hardware store after graduating from secondary school instead of going to university to take courses related to his interests:

What I would have preferred to have been doing would have been taking some courses in archaeology or geology. But at the time I didn't have funding. So that got me started working at Canadian Tire, I'll work there part time and go to school part time. I never did go into school part time. I really didn't want the overhead of student loans because at the time I'd seen them go horribly wrong. I kept on hearing about, oh my God this person just graduated from university and they owe, twenty, thirty, forty thousand dollars.

Though having to take on student loans was a deterrent for some, it was not for most. Many participants took on significant student loans in order to attend tertiary education. Although it did not initially impact on the strategies used, it often did after graduation. Those burdened with high levels of debt seemed to have less flexibility in the workforce. Some felt they had to settle for the best paying jobs, rather than the most interesting ones, or the ones with long-term potential. Debt also made it difficult for some to navigate toward their chosen field because they were either unwilling or unable to receive additional student loans to acquire the needed credentials. Jenna, who was unemployed and having difficulty finding satisfying work, said that she would like to go back to school to make herself more marketable but was hesitant because of a heavy debt load:

I was a lucky person that I found what I was looking for. I really liked doing it. If it wasn't a financial matter, I could totally see myself going back. I would do a Masters degree, I would do a Ph.D., I would go all the way. I like being a student, it's just the financials. It's too much money. I had a thirty thousand dollar debt from OSAP.²⁷ I pay the amount that I have to pay every month but I will probably be paying it for a long time. You don't have the opportunity to go back. I can try and get grants and things like that but I didn't have like the crazy good grades to do that. But I had a B+, so I could probably get accepted somewhere to do a Masters. It's just not financially feasible at the moment. Because ideally, that's what I'd love to do, I think I could, it would open up a lot more for me but I'd probably go back and

²⁷ OSAP stands for the Ontario Student Assistance Programme. It is a student loan programme available through the Ontario provincial government.

do the MSW because there's a lot more you could do with it. Because a lot of the jobs I've been looking for on the Internet if you had the MSW then you'd be getting it.

The presence of emotional support assisted young people to navigate toward their chosen paths and to explore their interests. Rather than receiving the critical messages experienced by many musicians, Andy said that the support of his family fuelled his music career:

My family and even my grandparents have encouraged every minute of everything I've ever done. I've never felt any resistance or opposition. So that way, it's almost like extra pressure because wow, I have too much freedom, I have to take advantage of it and really do stuff you know. So it was almost more inspiring than anything, it made me work harder to know that I was supported regardless, like I never felt like they were pushing me, it was just like, you know we're going to support you. So I'm like wow, I better work hard. So it really inspired me.

For a minority of participants, emotional support from family took the form of tolerating or even encouraging exploring. Such support made it easier for them to seek out various opportunities. Rebecca talked about the support that those around her provided as she tried different options:

My friends and family are all very open to the idea of wandering through life until something hits you, as long as you can pay your bills and you're happy which is the main message that my mom always gives me. I would never say that I always hear things like: "You better find something to do soon," or, "You know, time's ticking," or, "When are you going to get married." I've never, ever had those pressures. It's more just, what have you found that's interesting now.

The availability of emotional support also helped to mediate the impact of critical messages. Several participants said that the primary reason they were able to navigate

toward their chosen path despite critical messages was that they received support from others. Jenna, who wanted to navigate toward a helping profession, was criticised by her father for shifting from a major in economics to sociology. Here she explained what helped her to make the change:

The acceptance that I got from the Dean that it was an okay decision to make, to not stick in this. I had been ingrained that hard skills were important and these frivolous art courses aren't for me. They're not for my type of people and it's not the way I would have explained that to the Dean at that point. I would have been way too embarrassed but it was a good, logical decision. He backed me and he's a very powerful, prominent person in the school.

Those who did not have support to help them resist critical messages seemed more likely to stay in courses or jobs that they did not find satisfying. Kate said that one of the reasons she succumbed for a time to the messages from her in-laws to stay in a job that she did not like was that if she moved, she would be "cut off from her support system."

Emotional support was important for those who experienced roadblocks in navigating toward their chosen paths. Those roadblocks included not being accepted into the required training programme and having doubts about their abilities. Nora described the support she received from her professors when she was not accepted into a graduate programme in clinical psychology:

The message from my professors was: "Keep going, you have what it takes. We don't really understand why it didn't happen." That was a direct message from one of them. She said it was a fluke. It was just really encouraging, like keep trying.

Likewise, a lack of emotional support hindered some from navigating toward an occupation of interest. Lucy said that she knew she wanted to be an administrative assistant in secondary school but did not pursue it partially because no one encouraged her to do so:

My mother didn't care. It didn't matter what I did as long as I cleaned the house, that's all that mattered. No, my family's kind of weird. They're not very big on academics. Growing up we weren't allowed to do our homework until the house was cleaned and I love homework. I would be a professional student for the rest of my life if I could and that's how much I like it but I found that school was my escape from my family life and they're not really interested. They are not concerned, which is kind of funny because my mother is the same as me, very high drive for work ethic and all that there. At work she's an amazing person and I think that's where I get my strengths from but at home she's a whole different person. She's lazy, she doesn't care, she wants everyone to do everything for her and so, no I didn't get much good messages about you know, what to be or where to go in my life. I just basically kind of lived by the seat of my pants.

Opportunities

A key factor in the strategies that participants utilised related to the opportunities that were available to them. Their opportunities were influenced by the labour market and by participants' educational credentials, self-confidence, family responsibilities, and health.

Labour market. The strength of the labour market influenced the variety and availability of jobs for participants. A strong labour market allowed participants to save towards financial goals, pay down debt, and access opportunities through which they could pursue their career aspirations. Kate, who was living in Halifax, said that, despite having completed a Masters degree in counselling and having related job experience, she had been unsuccessful for six months in finding work as a therapist:

I really want to work and I have a strong skill set. I have these amazing reference letters and I've been getting good job interviews but nothing is coming. They're telling me that I don't have enough experience at the post-graduate level so I'm getting really cool job interviews but then the other people that are applying have more [experience]. Maybe because my resume is so linear, and the work maybe isn't valued in the same way, because I was away [working outside of Nova Scotia].

I think that people look at me and see that I look young, so I think that's part of it as well. But a lot of it, it's my lack of experience is what I've been hearing.

Kate's story can be contrasted with participants in the larger CERIC study living in Calgary who had easier access to well-paying jobs than participants in other sites because of the city's low unemployment rate. Participants in Calgary seemed to require fewer credentials and less job experience to find employment than in other cities. For example, Jason, who had recently started a job as a manager in Calgary with no experience or formal training, said that he was "unbelievably unqualified to be doing what I'm doing." In Halifax, higher demands for advanced credentials and more on-the-job experience were, according to participants, sometimes barriers to obtaining good jobs.

Education Credentials. The majority of participants had obtained a diploma or degree from a tertiary institution, or were in the process of doing so. The type of degree or diploma held by participants varied from those that were occupationally-specific such as accounting, office administration, or auto body to more general degrees such as a Bachelor of Arts or Science. A minority of participants had either dropped out of a tertiary education programme or had never attended one.

Some participants who did not have tertiary credentials felt that this limited their options, while others did not. Oliver expressed his frustration with being locked out of jobs for which he thought he had the skills:

What's holding me back from doing what I want to do would be to have more certificates or education. Had I decided right after graduation that what I wanted to do was be a computer network technician, then I would have gone through and gotten all the certificates. The only thing that's stopping me now is having a piece of paper that says I can do what I know I can do.

Those who did not feel disadvantaged by not having tertiary education were in occupations that did not require formal credentials. Ben, an entrepreneur, was illustrative of a participant on a career path that does not require tertiary training. He explained:

I'm glad I never went to university or college. A lot of people that I have met have spent more time doing that. While they were in school I was working full time. At the end, a lot of the people that I see, I'm more ahead than they are.

Participants with more occupationally-specific qualifications generally had an easier time finding satisfying work after graduation. However, some did not like the work they were trained to do or could not obtain employment in their chosen fields. Many participants with general arts and science degrees found it difficult to find satisfying work, either because they didn't know what kind of work they wanted to do or employers did not see them as being qualified. Alan shared his experience with trying to find a job after completing his Bachelor of Arts degree:

I think that there is some kind of impression that it's just a stepping-stone, it's grade 13. I've often heard it referred to as that. After I finished my BA last year, I was looking for a job for the summer and I can remember employers saying: "Oh, that's just a BA," that it was just basically the same as a grade 12 high school diploma.

Many participants with general arts and science degrees either returned to university or were considering going back to do professional or graduate degrees in order to increase their marketability. Those with professional degrees and trades or vocational certifications were less likely to be underemployed.

Self-confidence. For most participants, self-confidence was something that grew after they graduated from secondary school and as they experienced success in tertiary education, the workplace, or through travel. In a few cases, participants' self-confidence was significantly diminished by poor academic results in tertiary education or unsuccessful work experiences. Although they blamed themselves for their lack of success, it was often at least partially the result of poor supervision, unrealistic expectations, or not being properly trained.

For many participants, confidence in their academic abilities seemed to be a determining factor in their decision to go to tertiary education immediately after secondary

school. Many participants who did not do well academically in secondary school said that they never considered going to university because they did not consider themselves capable of doing so. This was the case for Maggie whose lack of confidence and low marks left her feeling that she was incapable of doing anything. Her success in an office administration programme gave her enough confidence to apply for a job at a call centre. This, combined with the good fortune of graduating at the time that the call centre was recruiting staff, allowed her to find work that paid well. Maggie's confidence grew through the success that she experienced in her workplace to the point that she started to consider a health profession, something that "was not in her range" when she graduated from secondary school. She eventually went to university where she experienced success that further bolstered her confidence.

Those who had their confidence shaken by a negative work experience were left wondering if they were capable of pursuing a career in their chosen field or were sufficiently interested to continue. Taylor had aspired to a career as an art curator, but is not working in that field because her self-confidence was compromised by a supervisor who treated her disparagingly:

I had been working in an art gallery since I was about sixteen or seventeen. I started off in my hometown while I was still in secondary school as a gallery assistant on the weekends and I was doing a co-op education programme at the art gallery. So I had been working up to this for a long time and I thought it was my big break. I thought that it was me stepping out of university into my career.

It was only a one-year contract, but it turned out to be an absolute nightmare. My boss was abusive mentally and emotionally. So I left, maybe five months into my contract, and I haven't worked in the field of art since then. It was just a really bad start to my career. It severely impacted my confidence. I went through a period of being extremely afraid to apply for any jobs in the art world, let alone talk to anybody from the art world. I just felt like she probably dragged me through the mud. I still don't know to this day if she has or not, although I've become more

involved again. But it definitely had a major impact on my confidence and I think it really affected my aspiring career.

Five years after this unfortunate experience, Taylor was still trying to gain enough self-confidence to return to the art world.

Family responsibilities. Many participants were married or in common-law relationships by their mid-to-late twenties. A sizeable minority had children. Some had taken on these responsibilities in their late-teens or early-twenties, while most had waited until they were in their mid-twenties or older. A few were caring for parents, grandparents, or siblings.

Family responsibilities constrained the process of finding a career-related place for some participants, while being facilitative for others. Many participants said that, once they were in a serious relationship, they needed to factor their partner's needs into their plans. It might, for example, be necessary to pass up a good job opportunity or attendance at a university of their choice if their partner was unable or unwilling to relocate. Financial responsibilities such as mortgages tied some participants to a particular employer, whether the job was well-chosen or not.

Having children, in particular, had a significant impact on what participants did, especially for females. Female participants were more likely to report having left the workforce completely or cut their work back to part-time to accommodate the demands of family. Stacey, who had been out of the workforce for five years raising children, described her plan when her children started school:

I figure when they start school I might go and get mother's hours if I'm able to, go work part time wherever. I just don't want to be working six o'clock at night when they're home. I want to just try and get the day shift only and get off when they're off school. As soon as they get off school I want to get off of work so I make sure I'm there... My husband is on a weird shift, so the less babysitters I've got to pay for, the better off I am.

Several male participants said they felt the need to take the best-paying job possible, even when they preferred to do something else, in order to support their families.

The experience of having children, however, was facilitative for some participants. A number of women said that having children had acted as a catalyst for them to go back to school and increase their professional credentials. They wanted a career in which they could feel proud and from which they could support their families. Val described how having children impacted upon her career path:

If I didn't have my children, I do not believe that I would be a human service worker. I actually didn't mind working at housecleaning or whatever. It made the difference because I thought I am out slaving and working and this just isn't going to pay off. And my kids deserve more. So I think that was basically the driving force.

Health. Several participants reported that an illness or injury limited the opportunities that were available to them. Carly described what happened in the aftermath of a car accident:

I was busy trying to get well again after the accident and my course stopped because I couldn't sit at a computer for X amount of hours a day studying and doing things. My main goal was to try and get well enough again to start working or go back to school but it didn't get to that point. I was in physio for six months, which pretty much didn't leave a lot of time for other things. It's painful for me to stand for extended periods of time. So it's kind of difficult to try and come up with a way to be comfortable and to concentrate on what you're doing.

In some cases, health issues helped participants to clarify their career pathways or increase their resolve to pursue their chosen career paths. Val became clear that she wanted to work with disabled children after her son who has a disability was born. Dylan's ability to resist his parents' expectations was increased when he was diagnosed with cancer.

Impact of opportunities on strategies utilised. The availability of opportunities was critical in order for participants to be able to both navigate toward a chosen field and to be able to commit to it. The narrowing of opportunities that occurred as a result of a weak labour market, family responsibilities, or health problems made it difficult for participants to utilise a navigating strategy. Carly planned to navigate toward a nursing career but opted not to go to nursing school when her grandmother became ill:

I was accepted to Presque Isle²⁸ and I declined the offer at the time because my grandmother was sick and then my grandfather got sick and I chose to stay home ... to be with them while they were still here. When they both passed away, I didn't have an opportunity to do the course then. So I just gave up that dream.

For some, family responsibilities put limitations on the opportunity to explore. The late-teens and early-twenties are an ideal time for exploring because most young people do not have the responsibilities of a mortgage, marriage, and/or parenthood. As they moved into their mid-to-late-twenties, an increasing number of participants took on these added responsibilities, which, though often welcomed, also narrowed opportunities for exploring. This was the case for Maggie, who had spent much of the preceding ten years exploring her options. Although she would have liked to continue pursuing more meaningful work opportunities, she said it was not as easy since getting married: "I have to be more calculated about exploring and go about it more intentionally. The question is, given my responsibilities, 'How can I satisfy my curiosity?'"

Limited opportunities made it more likely that participants would employ a settling strategy. A few participants expressed a sense of having "given up" trying to find a satisfying career. More common was a sense of "settling for now" with the idea that they would eventually find something more satisfying. Rebecca explained the connection between her father's death and her decision to settle for a job she did not particularly like:

²⁸ Carly is referring to the Northern Maine Community College which is a polytechnic located in Presque Isle, Maine. Maine is a state in the northeastern part of the United States that borders on Canada.

When my father really became sick I returned home. I would never consider that an obstacle. It was a huge learning experience for me and something I'll never regret ... So I returned home from BC for that and then decided to stay home after that to be close to my mom. So that's why I'm still here in Halifax actually. For the past year, I've been here to help her and support each other. And because of that I took a job here in Halifax which sort of relies on previous skills. I just knew it wasn't going to withstand my travelling in the direction I wanted and I'd already decided I didn't want to be in the field that I am currently in but I fell back on that because it was a good job. I've never got my feet in one spot for longer than maybe six months after university. So I figured it would be a chance to put in a good year and have it on my resume. There are pluses to it but I know it's sort of settling for the time being but for the right reasons.

A lack of job opportunities made it difficult for participants to commit to the careers they had navigated toward. Several participants had the qualifications required but could not find stable employment in their fields. Anna, who aspired to be an environmental scientist, was settling—at least temporarily—as a manager of a movie theatre because she could not find work in her field:

I went back full time to do my sixth year and got my two degrees and then I kept getting contract work with the Department of Natural Resources over the next couple of years. It would be six months here, one year there, sometimes it was only for a couple of weeks, just whatever they had. And I started to work at the movie theatre just so I'd have a part time job to tie me over between the contracts. It didn't really have anything to do with my line of work but I love movies, so you get free movies that way. So I did that and then last year, after the Conservative government got in, they don't really allot a lot of money to the environment, so all of my programmes were cut quite a bit and they didn't have any more money for me. So right about that same time, the manager at my movie theatre left and I got offered his position. So I became the manager of the movie theatre because it was a salary position and it was just the right time because I knew I wasn't getting anything at

Natural Resources for a while. That was last summer. So all of a sudden I became salary at a movie theatre which had nothing to do with what I want to do just because it was convenient at the time but I kept looking for environmental work, I was applying mostly in Halifax but a little bit all over Canada with not a lot of luck.

A lack of opportunities seemed to make it more likely that participants would engage in drifting. Similar to Anna, several participants said they were at a loss as to what to do and drifted into the first jobs that came available. Mike who was part of the larger CERIC study had the qualifications to work as a golf course manager but could not find well-paying work in the golf industry, opted to take a job as a fisherman's assistant in order to support his family. The biggest barrier Mike reported to finding satisfying work was "just living on Prince Edward Island because it's just so short based [seasonal], it's hard to find a good career. Right here doesn't leave me very many options." Others drifted because their lack of credentials kept them in low-skill/low-wage jobs. Illustrative of this was Adrian who worked as an unlicensed mechanic. After graduating from secondary school, he completed an auto body course, but could not work in the field because the chemicals used in the industry impacted negatively on his health. For ten years, he drifted from one job to another:

Most of them were just dead-end jobs. I probably shouldn't have even bothered with them. It wasn't what I wanted to be doing. They were just a job to make some money. They really had no future. I just got by and haven't done anything really meaningful career-wise. In the time I've had, I could have done a lot more than I did, but I just go day to day.

Self-confidence impacted on the strategies utilised by some participants. Those with low confidence seemed to have an inclination to use a drifting strategy. Maggie utilised this strategy when she started an office administration programme after secondary school at her mother's insistence:

Upon graduation I didn't know what I was going to do. I thought maybe about going back to high school for a year, but my mother said you've got to do something. Through some lucky phone calling, my mother managed to get me into a programme at the community college. I at least could feed myself and that was the plan. I actually would have some sort of a job.

There were a host of sub-factors that influenced the degree to which participants had career-related opportunities. The strength of the labour market impacted on both the quality and quantity of jobs that were available. Factors such as their educational credentials, self-confidence, family responsibilities, and their health affected participants' ability to take advantage of the job opportunities that were available to them. Those who had limited opportunities often used a drifting or settling strategy.

This section discussed six factors that impacted on participants' strategy utilisation: knowing what they wanted to do, messages about what they should do, resistance skills, tolerance for ambiguity, and the support and opportunities available to them. Many of these factors were also influenced by a sub-set of factors. The presence of so many influences on the strategies participants used to find a career-related place made the school-to-work transition unpredictable and complex for most.

Changes in Strategy Utilisation

The findings presented in Chapter Five indicated that the strategies that participants utilised to find a career-related place and the outcomes they reached were fluid in nature. Most participants used more than one search strategy (navigating, exploring, and drifting) to find a career-related place. The use of the engagement strategies (settling and committing) also fluctuated as participants shifted between the use of these approaches and the various search strategies. The present chapter discussed six factors that impacted on participants' strategy utilisation. The following section outlines the way that a shift in the factors and related sub-factors pertained to changes in strategy utilisation.

A common point of transition in terms of strategy utilisation occurred when participants who were navigating discovered through the process that a discipline or occupation was not what they expected. Lindsey described what happened when she started

taking a polytechnic programme that would certify her to work with people who were visually impaired:

I took university courses that were all about the brain and eyesight and stuff like that and I found it really interesting. So I found this college programme that was very, very specialised, which I think was the problem. It was too specialised for me. I really liked the course work and stuff like that but the practical side, it was just too much. Like when they were talking about what I would have to do, like I'd be working with obviously, visually impaired people, which would be fine but it would be more out of my house and not really stable. I didn't want to do it as much because I was really looking for stability and knowing that I could have a job kind of anywhere I went. But this one is really dependent on if there's a position or if there's people around in a certain place. So I just kind of decided to move away from there which was hard but it was a better decision for me I think.

Torin, who had been navigating toward orthopaedic surgery, said that he had shifted to being an explorer. He was able to do this by "being open and being able to recognise what I am passionate about, as opposed to what I've got experience doing." He indicated that having a girlfriend who encouraged him to find his passion had been instrumental as well as being able to "chip away at the idea that I have to fit into some standard mould."

Determining what they wanted to do was a turning point for some. Vanessa moved from utilising an exploring to a navigating strategy when she found out what she wanted to do:

I did do some counselling before I went into the programme and did some self-assessment to find out if this is really what I wanted. Is it a good match for who I am as a person? I found through some of the tests, like Myers-Briggs and a few others, that it did point in this direction. So I knew that I wanted to enter in a communication related field either in broadcasting or film, something, you know maybe in the entertainment field or having a PR focus. I could work in health care, film, I could work in an agency, there's many different aspects of PR I could be

employed in. As far as support goes, it took me finding out those answers for myself before I was ready to go to my friends and my family and say: “Hey, guess what? I’m going back to school again.”

Those who drifted sometimes shifted quickly to navigating if they found the right opportunity. Anthony entered the field of dental technology, not because he was interested in it, but because he was offered free training:

Going through a web site I found this listing for a dental lab and they said on-the-job training provided and it’s like, okay why not? That’s pretty much hook, line, and sinker for me. It’s like okay, that’s a job where they don’t want somebody to Mickey Mouse around. That’s why I took the job. And they’ve lived up to it. It was the biggest fluke of my life.

Participants who felt committed to their work at one point sometimes shifted to a settling strategy if there was a significant change in their workplace. Adam found his work satisfying and stimulating for the first two years. However, he became very dissatisfied with his work when he was “underutilised” by a new manager. He settled for another two years with the job but eventually began utilising an exploring strategy when he could no longer tolerate his work. Financial planning “peaked his interest” and he began to explore the field by taking courses. His plan was to complete the required certification and then take on a few clients while he kept his present job.

In addition to those changes just described, there were a number of other points of transition found in this study that were related to changes in the six factors and sub-factors identified earlier in this chapter. They are summarised as follows:

The strategy utilisation of participants who were navigating sometimes changed to:

- committing as they learned more about the realities of what they were navigating toward and realised it was a good fit.
- settling, drifting, or exploring as they learned more about the realities of what they were navigating toward and realised that it did not fit with their goals.

- settling if they were encouraged to continue in a field that did not interest them or they had a low tolerance for ambiguity.
- drifting, exploring, or settling if their chosen career path was inaccessible (e.g., debt, low marks, family responsibilities, critical messages, low self-confidence or not being able to find a job in their field).

The strategy utilisation of participants who were exploring sometimes changed to:

- navigating if they found an education or career path that they believed would be satisfying.
- drifting or navigating if they became frustrated with not finding a suitable path or overwhelmed with the number of choices available.
- settling if they were not able to determine what they wanted to do or if they took on family responsibilities that required them to stay in a job that they did not enjoy.
- settling if they did not have the internal or external resources to pursue their preferred career option.

The strategy utilisation of participants who were drifting sometimes changed to:

- navigating if they found educational programmes or work that interested them or received support to identify and follow their preferred path.
- committing if they liked the field in which they were working.
- exploring if they gained more internal or external resources or if they became so frustrated by the educational programmes or jobs they found themselves in that they choose to exercise more personal agency over their choices.
- settling if they were not able to determine what they wanted to do or if they took on family responsibilities that required them to stay in occupations that they did not enjoy.

The strategy utilisation of participants who were settling sometimes changed to:

- exploring or drifting if they were laid off or began to find their job intolerable.
- navigating or exploring if they were encouraged to examine their interests and abilities.

The strategy utilisation of participants who were committing sometimes changed to:

- exploring, drifting, navigating, or settling if they lost their jobs or started to find their work less satisfying.
- navigating if they discovered a field of work they preferred.
- settling if they had to take a better paying, but less satisfying job because of family responsibilities.

Conclusion

This chapter highlighted the way that six factors impacted on the strategies utilised by participants. The complexity of participants' career pathways could be seen in the wide range of factors that shaped the particular configuration of search and engagement strategies. These factors interacted with one another in such idiosyncratic ways that it was difficult to predict the impact of particular factors. Strategy utilisation could change quite quickly as these factors shifted.

The following two chapters provide an analysis of the data presented in Chapters Five and Six. In doing so, they discuss ways that the findings of this study are explained by chaos and complexity theory and other constructs found in the career development and youth transitions literature. The discussion presented in Chapter Seven helps to shed light on how participants constructed their career pathways in unpredictable and complex environments. It also examines the ways that the messages that they received often complicated the process of finding a career-related place. Chapter Eight provides a set of career planning guidelines for young people and those that support them that is based on the findings of the present study.

Chapter Seven

Finding a Career–related Place in an Uncertain World

Introduction

The previous two chapters presented the study's findings. A key process identified was that of finding a career-related place through using different combinations of three search strategies (navigating, exploring, and drifting) and two engagement strategies (settling and committing). This search for a place brings together themes found in both the youth transitions and career development literatures. A central feature of the participants' narratives is related to identity exploration. Like Arnett's (2000a, 2004) emerging adult studies concerned with youth transitions, many of this study's participants engaged in identity exploration by trying new career options, which in turn, appeared to be essential to their search for satisfying work. Similarly, in the career development literature, identity development and career choice have been closely linked (Super, 1957, 1981; Super et al., 1988). While developmental imperatives partially explain the contingent nature of participants' career pathways, they do not account for the abruptness or the number of the changes that often featured in participants' narratives. It is the contention of this thesis that chaos and complexity theory can account for this type of change while at the same time explaining through the phenomena of attractors how participants found their career-related place over time.

This chapter begins by examining the typology of strategies used by participants to find a career-related place in relation to the three career development theoretical perspectives discussed in Chapters Two and Three: trait and factor, developmental, and chaos-oriented approaches. The discussion in this chapter next moves to an examination of how two tenets of chaos and complexity theory, non-linear change and attractors, can be applied to the process of finding a career-related place. Following this, consideration is given to the distance between participants' expectations about how the school-to-work transition would unfold and how it occurred for most. This disconnection between expectations and what happens is explained by the existence of what is referred to in this chapter as a "career myth." The career myth led young people and their parents to believe

that career pathways should be linear in nature. The impact of the career myth and reasons for its existence are then explored.

Applying Career Development Theories to Strategy Utilisation

This section provides a detailed examination of how the trait and factor, developmental, and chaos-oriented approaches to career development can help us understand the five strategies utilised by participants.

Trait and Factor Approaches

The trait and factor approach is the theoretical perspective that has dominated the career counselling field since its inception in the early twentieth century (Sharf, 2009). This theoretical perspective is premised on the belief that an individual's traits (interests, values, personality type, and skills) can be matched to the factors required to perform a particular job successfully.

Navigating. There were two groups of participants who used a navigating strategy. One group had significant exposure to their education and career choices during secondary school and/or tertiary education courses, work internships, paid employment, volunteer positions, or extracurricular activities. As a result, this group had at least some sense of how their choices fit with their interests, skills, and values. In contrast, a second group, which comprised the majority, consisted of those who made choices at the time they graduated from secondary school without the benefit of even the most cursory understanding of their vocational preferences and how, if at all, these connected with the choices they were making. A striking example of this dynamic was provided by Jeff who said that he opted to pursue a career in computer networking because he liked playing computer games. He had no idea about the realities of working as a computer engineer and discovered after completing his tertiary programme that it was not something he liked doing. Jeff's experience coincided with Ball et al.'s (1999) findings that it is common for young people to make career choices that are not well researched. Other studies have found that few young people systematically investigate career options (Bryce & Anderson, 2008; Schneider & Stevenson, 1999).

While unfortunate, the lack of awareness about their choices and how, if at all, they fit with their vocational personality is not surprising given the pressure that young people are under to make career decisions that are acceptable to those around them (Krumboltz, 1992, 1993; Peavy, 2001). Participants who used a navigating strategy despite knowing little about their chosen path may have been enacting a perfunctory answer to the question of what they wanted to do.

One of the most heartbreaking aspects of working with young people in the transition from school-to-work occurs when they choose career pathways that are clearly not a good fit from the outset. For example, one young man that I counselled in my clinical practice chose engineering technology despite not liking maths and physics when he was in secondary school. The most cursory assessment of his vocational preferences would have likely indicated before starting the programme that it was not a good fit. Qualitative and quantitative assessments of young people's vocational preferences can help young people avoid time consuming and often expensive exploration with education and career pathways that do not fit their emerging vocational identities. A trait and factor assessment may have helped Val realise that she did not like working in an office before she had incurred a \$20,000 debt getting an office administration diploma. In retrospect, she said that it was obvious before she enrolled in the programme that she did not like sitting behind a desk for long periods of time.

Participants who experienced the most success in navigating seemed to be those who had at least some prior exposure to their chosen field. Participants like Vanessa indicated that becoming more aware of their vocational preferences and the relation of their choices to their preferences, gave them confidence in their decisions and made it easier for them to convince those around them that theirs was a worthy pathway. These findings coincide with Arthur et al.'s (1995) and Carpenter's (2008) observations that it is important for young people to be cognisant of why particular career options are a good fit. The trait and factor approach can assist young people to understand more about their vocational personality and why or why not particular options are a good fit. This would be a useful exercise for young people to engage in prior to navigating toward specific careers.

Exploring. The trait and factor approach views exploration in a more circumscribed way than defined in the present study (Sharf, 2009). It regards exploration as part of a lock-step career decision making process: one assesses their traits, explores their options, and then uses their “true reasoning” to make a decision (Harren, 1979; Sharf, 2009; Tiedeman & O’Hara, 1963). From this perspective, exploration is a point-in-time event that occurs through a process of gathering occupation information to assist with making a rational career decision.

The approach to exploration that is advocated by the trait and factor approach is quite different from the experience-based identity exploration that has been explicated both in the present study and in other research projects (Arnett, 2000a, 2004; Vaughan et al., 2006). However, it was necessary for participants to have at least a rudimentary understanding of their traits (interests, values, and/or skills) in order to have reference points to guide experience-based exploration. The more self-awareness and occupational information they had, the more they seemed able to focus their exploration in promising areas. This was the case for Hannah who knew when she graduated from secondary school that her interests lay in human rights and international development work. Instead of trying to match her interests with a specific occupation, she used her interests as criteria that guided successive career decisions.

Drifting. The use of drifting as a strategy by which young people might find their career-related place fundamentally stands at odds with the tenets of the trait and factor approach. Instead of making a rational career decision based on careful self assessment and plentiful occupation information, young people are engaged with whatever educational or occupational options happen to present themselves. From the trait and factor perspective, limited self-awareness and a dearth of knowledge about their chosen option would be the primary reasons young people take a career pathway that is readily available rather than carefully selected. While these factors contributed to the utilisation of drifting as a strategy employed by participants, they were by no means the only reasons. In several cases, participants had a significant amount of self-awareness and occupational knowledge, but critical messages, low self-confidence, and/or a lack of financial resources meant that they engaged in drifting.

Lucy was an example of a participant who drifted after secondary school despite knowing that she wanted to go into office administration. Her interest in the field had come about as a result of two cooperative education experiences that allowed her to experience first hand the realities of working as an administrative assistant. However, she hesitated to attend a polytechnic in order to get the necessary training because of the need to take out a large student loan and a lack of confidence. Instead of navigating toward office administration, she drifted first into a job at a hotel cleaning rooms and then a job as a security guard. Lucy began navigating toward being an administrative assistant five years after secondary school graduation when she was fully funded by Human Resources Development Canada²⁹ to take an office administration programme.

Some participants utilised a drifting strategy because they could not get those around them to support their plans. This resonated with Magnusson and Berne's (2003) findings that many secondary school seniors reported having difficulty obtaining support for their career plans. As was pointed out in Chapter Six, this was particularly true for participants like Jeff who wanted to pursue a career as a musician. However, his mother was not supportive of his desire to be a musician and instead wanted him to enter one of the trades. In order to pacify his mother, he applied three times to various polytechnic programmes that held no interest for him. Each time, he withdrew from the programme just before it started. Without the resistance skills to defy criticism, participants like Jeff sometimes resorted to utilising a drifting strategy. The trait and factor approach appears to be silent on the matter of what a young person does if a fitting choice is not acceptable to those around them.

By engaging in a self-assessment process and learning more about occupations that fit their emerging identity, a young person who is drifting may begin employing a navigating or exploring strategy. However, when drifting is a response to other issues such as disparaging messages about what they want to do, those constraints may need to be addressed before productive career planning can take place (Krumboltz & Coon, 1995). For example, career counselling with young people who are using a drifting strategy may need

²⁹ Human Resources Development Canada was a federal government agency that provided funding to individuals receiving Employment Insurance benefits to take training courses that increased their marketable skills. People funded through this program often continued to receive Employment Insurance benefits while they were engaged in training.

to initially focus on helping them examine conflicts between external expectations and personal preferences and how the discord may be making it difficult for them to make good career decisions.

Settling. By definition, participants who used a settling strategy were in jobs that they did not find satisfying. Those who used a settling strategy varied in their understanding of what made their work unsatisfying. Poehnell and Amundson (2003) have suggested that people can find a job unsatisfying for different reasons. Some do not like the career field they are in, while others like the career field in general but not the particular job. Still others may like the field and their job but not be fulfilled because of the organisational culture or other aspects of the company or organisation for which they are working.

Trait and factor approaches can help delineate which aspects of the work are not a good fit and which, if any, changes would be most helpful and expedient to make. There appeared to be a tendency for participants to assume that they were in the wrong occupation if they did not like their job. For example, Adam used a committing strategy with his job as an engineer but then shifted to a settling strategy when there was a change in management and the job became less satisfying. He assumed that engineering was no longer a good fit and began looking at alternative careers rather than looking for another job in his field. Adam could have benefitted from a trait and factor approach to career development that would have helped him understand that it was the management style of his new supervisor that was causing the dissatisfaction rather than engineering itself.

Once a young person understands why their job is not satisfying, it may be feasible for them to make changes that will make it a better fit. A discussion with their supervisor about taking on additional responsibilities may be all that is required. For others, it may be finding a secondment or a job with another company. Alternatively, there may be little they can do to make their work more satisfying. However, with more self knowledge, they may be able to pursue their interests or use their skills outside of the workplace. This strategy was exemplified by Scott who pursued his passion for diving and coaching volleyball outside his paid employment with the military.

Committing. Participants who used a committing strategy sometimes had only a very general sense of what it was about the job that made it such a good fit. This made it difficult for them to identify other occupations that might have been of interest to them if they lost their job or circumstances changed and they no longer found their job satisfying. Galen found himself in this situation when he lost a satisfying job as a production planner with an auto parts company due to a severe downturn in car sales. Although he had liked his job, he was not able to articulate what he was looking for in another job. As a result, Galen had difficulty determining how he might be able to transfer his interests and skills to other types of work. He could have benefited from a better understanding of his vocational personality and how it fit with a range of occupations.

Limitations of trait and factor approaches

While the trait and factor approach is instructive in terms of the strategies, it does little to shed light on the change and unpredictability that characterised many participants' career pathways. The process that participants engaged in relation to finding a career-related place suggests that there was a significant developmental aspect to their career paths similar to that identified by Super (1957, 1984, 1990) and Arnett (2000a, 2004). This finding is corroborated both by the Australian Life Patterns study (Dwyer et al., 2005) and the New Zealand Pathways and Prospects study. The New Zealand study found that "young people choose pathway options and careers that fit with multiple and changing ideas about how they see themselves and the possibilities for their lives" (Vaughan & Roberts, 2007, p. 91).

To illustrate, Rebecca, a 26-year-old participant, talked about the close relationship between finding a career-related place and her identity:

I think it's come down to wanting, or deciding on a quality of life, as opposed to the job or the career. I want to enjoy whatever I do as a career option but I also want to enjoy my life. I've always been one to say since I was a little kid that I don't want to work 50 weeks of the year and have 2 weeks to myself. I love being free and outside and doing my own thing and having the time to do that. So I think I've

been looking for a job that suits me as a person but also suits the lifestyle that I want for me.

Many participants like Rebecca talked about the challenge of making career choices when they graduated from secondary school and had little awareness of their vocational personality or how it might change over time. Lyle, a 25-year-old participant, summed up the dilemma faced by many secondary school graduates by saying: “You have to have a foreshadowing of anything that you could ever want to do when you’re eighteen. How do you do that?” Trait and factor approaches to career decision making largely ignore the developmental nature of career development and the identity exploration that occurs for many young people in their late teens and early twenties.

Developmental Approaches

A developmental approach to career development stresses that career decision making is a process rather than a point in time event. Central to this approach is the notion that identity and vocational choices are closely linked (Arnett, 2004; Super, 1957, 1981). The interplay between these two elements means that career choices will shift as a young person’s identity evolves. Thus, a young person who makes a career choice in secondary school may find that it no longer fits a few years later. A developmental approach suggests that a period of identity exploration is critical for young people seeking to find satisfying work. This perspective normalised the experience of the majority of participants who either did not know what they wanted to do when they left secondary school or subsequently changed their career plans.

Another aspect of the developmental approach that helps to explain the findings of the present study relates to Super’s (1980, 1990) notion that individuals play a number of roles beyond paid employment that include studying, community service, home and family, and leisure activities. In particular, his assertion that people place different levels of importance on various roles and that salience can change over time as they take on new roles. For example, a young person who becomes a parent may place less emphasis on paid employment. This dynamic helped to explain why some participants who were married or had children stayed in jobs they did not find satisfying.

Navigating. While the assessment tools utilised by the trait and factor approach are useful, the best assessment tools coupled with comprehensive research do not guarantee that a young person will stay in the occupation to which they are navigating (Bloch, 2005; Drodge, 2002; Pryor & Bright, 2007). Even participants who navigated toward pathways that were a reasonable fit when they were chosen often eventually changed career direction. From a developmental perspective, a young person who is employing a navigating strategy is, at best, making choices based on their identity at the time they make their choice. The act of engaging in a particular pathway has been shown to change young people's identities (Vaughan & Roberts, 2007). Thus, an option that fits a young person at one point may no longer do so because of changes in their identity. Take for example Will's career pathway. His plan after graduating from secondary school had been to take a business degree and go into marketing. In his third year, he took a business policy and law course that fostered an interest in corporate law. After being unsuccessful at securing a clerkship with a corporate law firm, he went to work with a firm that represented plaintiffs in class action law suits. Will was surprised to find that he liked representing plaintiffs because it made him feel that he was making a difference in his clients' lives by helping them attain justice. Will's interest in helping people was not something that was part of his identity until he began representing plaintiffs.

Exploring. Developmental approaches to career emphasise the importance of identity exploration. From this perspective, it is ideal for young people to have a range of experiences that facilitate identity exploration prior to making long-term career choices (Arnett, 2004). Flum and Blustein (2000) have emphasised that exploration is essential in order for a young person to construct an identity rather than have one conferred upon them. Accordingly, those who utilise an exploring strategy are developmentally doing exactly what they should be doing by exploring career paths that are of interest to them. However, the findings of the study clearly indicate that exploration was a strategy that few were supported to use. In most cases, it was either actively discouraged or significantly delimited. The trait and factor understanding of exploration that has dominated much career development thinking may explain why participants were discouraged from using a more comprehensive exploring strategy.

Participants who engaged in exploring went beyond simply seeking occupational knowledge advocated by trait and factor approaches and instead opted for a more experience-based approach that was part of an identity quest. Andy's decision to pursue music professionally evolved from playing guitar and piano while he was growing up. His primary interest when he graduated from secondary school was to be a professional musician. With this in mind, he enrolled in a Bachelor's degree in music that focussed on performance. While in university, he began teaching guitar as a way of earning money. At the same time, he continued to perform. He became increasingly disillusioned with being a musician as it often seemed to be focussed on providing cheap entertainment rather than a quality performance. After graduation, he decided to do more teaching so he could be more selective about where and for whom he performed. Andy was offered a job teaching music at a private school but soon realised that he did not want to teach children who were not passionate about music. Shortly after this experience, he met a teacher who changed his way of looking at music completely. As a result, Andy gave up his aspirations to become a commercially successful musician and focussed on giving private music lessons and improving his guitar skills by working with this teacher.

Participants who utilised an exploring strategy seemed to engage in the open-systems thinking that is recommended by Pryor and Bright (2007). Recall again Carol who started an office administration programme with the idea that it would give her an opportunity to see if she wanted to pursue a career in that field. What distinguished her from participants who were using a navigating strategy was that she had not made a commitment to become an office administrator. Carol knew that her plans might change based on new experiences or changing circumstances. From a developmental perspective, the opportunity to be immersed in the field through class work and work placements gave Carol the kind of hands on experience that other researchers have shown is important for identity construction (Dwyer et al., 2005; Vaughan & Roberts, 2007). In her case, it became evident during her work placement that being an office administrator fit her emerging identity.

The paradox for participants who engaged in a developmentally appropriate activity through exploring was that they were often criticised while those who made long-term choices, despite not being ready to do so, were applauded. Carol's parents were not happy

that she did not have a long-term career goal when she graduated from secondary school. When she decided to leave her polytechnic course to work in retail as a way to figure out what she wanted to do, her parents responded by saying that they “had not immigrated to Canada so that she could throw her life away.”

Drifting. From a developmental perspective, having the opportunity to engage in a range of new experiences is vital for young people because it is through this process that their identities are constructed and their careers are produced. Drifting appears to be one way that this can occur, albeit in a rather indiscriminate fashion (Inkson & Myers, 2003). In accordance with Gray (2000) and Carpenter (2008), findings from this study show that there were many unanticipated benefits to drifting outside of tertiary institutions. For some participants, these included an increase in self confidence and time for further growing, maturing and learning to take place. Arthur et al. (1999) have observed that having a series of varied and casual jobs can assist a young person to develop flexibility, multiple skills, self-confidence, and enterprise.

Settling. A developmental approach underscores the roles that young people play beyond being students and workers, particularly as they move into their mid-twenties and beyond (Super, 1980, 1990). Some participants employed settling in terms of their work role because other roles had more salience for them (Super, 1990). Recall Meg who settled for a job with a furniture manufacturing company because it provided the financial security she and her fiancé needed to fulfil their dream of buying a house and having children. Meg indicated that roles related to home and family were more important to her than that of a worker. It appeared that she derived her identity more from her family role than from paid employment. This was also the case for Scott whose identity was primarily expressed through working as a volunteer coach and pursuing diving rather than his paid work as a naval electronic engineering technician.

Committing. A developmental approach to career decision making helps to explicate how the factors that make work satisfying can change over time. Several participants who utilised a committing strategy at one point said that what made a job

satisfying changed over time. Earlier in their career, they were content to work long hours in jobs they found stimulating. However, that changed for some once they became involved in long-term relationships. This was even more the case once they became parents. While the work itself was still satisfying, the role conflict caused by long work hours made the job less attractive for some participants (Duarte, 1995; Scheck et al., 1997). The impact of role conflict on strategy utilisation was depicted by Nick who left a satisfying job with an accounting firm after becoming a parent to take a less fulfilling job with government. While he loved working in the private sector as an accountant, the demanding hours meant that the job was no longer satisfying because of the role conflict that it caused.

Limitations of developmental approaches. Findings from American (Arnett, 2000a, 2004) and Australian studies (Dwyer et al., 2005) show that most participants who had plans when they left secondary school changed their original plans as they had new experiences or circumstances changed. As posited by Arnett (2000a, 2004), participants engaged in identity exploration in an experiential fashion by engaging in tertiary education, paid and unpaid work, and a variety of extracurricular activities. As they learned more about themselves, career-related choices also changed. This dynamic at least partially explains why the emerging adulthood years (18-25 years old) are what Arnett (2004) has referred to as the “age of instability” in relation to work and education as identity evolves.

As useful as this developmental perspective is in understanding the career pathways of participants, there are still aspects of their pathways that are left unexplained without the introduction of a chaos-oriented approach to career development. In particular, a number of factors identified in Chapter Six (knowing what they want to do, messages about what they should do, resistance skills, tolerance for ambiguity, and the support and opportunities available to them) and sub-factors were shown to impact on strategy utilisation in ways that made many participants’ career pathways non-linear and unpredictable. Chaos and complexity theory focuses on both the non-linear change that occurs in complex systems and how such systems find order over time. It is for this reason that the remainder of this discussion will explore the novel contribution that chaos-oriented approaches offer to an analysis of participants' experiences.

Chaos-oriented Approaches

While the experiences of the study participants can be at least partially explained by the developmental perspective of career development and youth transitions, the application of chaos-oriented approaches provides additional and novel insights into participants' narratives that advances Pryor and Bright's (2007) work. Chaos-oriented approaches emphasise that it is not typically possible for young people to make long-term career plans. There are simply too many factors at play to make this possible. From this perspective, it is normal that a young person's career plans are contingent.

Navigating. As would be predicted by chaos-oriented approaches, the pathways of participants who were navigating often changed because of a host of factors including a lack of job opportunities, family responsibilities, health problems or the impact of chance events. Taylor's career pathway is an exemplar of this phenomenon. At the time of secondary school graduation, she had decided to become an art gallery curator. This was a reasonably well-informed choice as she had worked at an art gallery during secondary school and had completed a cooperative education placement at another gallery while attending university. Immediately after graduating with a fine arts degree, she secured a job at a gallery. While she loved the work, her supervisor was verbally abusive. As a result, Taylor left the job after five months. Her confidence was so undermined by this experience that she was not able to apply for jobs in other art galleries. Instead, she began a series of jobs that were unrelated to her original career goal.

The narratives of participants like Vanessa and Nora, who had long-term specific career plans when they graduated from secondary school, indicated that some who used the navigating strategy were either unaware of or in denial about the contingencies of their plans. In contrast, some participants who used a navigating strategy seemed to engage more in open-systems thinking that accepted that there were limitations to their personal control and recognised the contingency of their plans (Pryor & Bright, 2007). Navigating did not appear to create a problem for participants who brought open-systems thinking to the process by approaching their plans with positive uncertainty. Positive uncertainty encourages young people to pursue goals but to remain open to changing their minds on the basis of future experience (Gelatt, 1989, 1991; Gelatt & Gelatt, 2003). On the other hand,

participants who experienced a psychological fall when cherished plans did not work out or followed through on their plans despite knowing that they no longer fit seemed to be those who approached their plans with closed-systems thinking. The importance of young people approaching their career goals with positive uncertainty will be discussed in detail in the next chapter (p.234).

Exploring. Chaos-oriented approaches advocate an exploring strategy for reasons that go beyond developmental benefits. Such approaches acknowledge that individuals have limited control over many of the external factors that impact on their career pathway. An occupation can be perfectly suited to a young person's emerging identity yet they are not able to enter the field because of a poor labour market or other factors beyond their control. Participants who were exploring rather than navigating toward an option appeared to have an easier time changing course. When they change paths, navigators may have to say to the people around them: "I changed my mind." In contrast, an explorer in the same situation simply has to say: "I explored the option and it didn't fit." The former seemed to be far more difficult than the latter for participants. As a result, those who were using an exploring strategy seemed to be able to change course more easily when required.

Drifting. In many ways, participants who used a drifting strategy embraced chaos-oriented approaches to career development. As Krumboltz and Levin (2004) predicted, drifting did allow some participants who utilised it to benefit from the serendipity of discovering that their interests and abilities lay in a completely unexpected area. Like explorers, those who drifted were not burdened with the blinders of fixed plans so it was easier for them to take advantage of unexpected opportunities (Gelatt, 1989; Krumboltz & Levin, 2004). Flum and Blustein (2000) have underscored the point that identity exploration and career development can occur through haphazard approaches. This was the type of strategy that Rebecca engaged in when she took time out after graduating from university to travel and do itinerant jobs. She used these experiences to help her learn more about her skills, values, and interests. Anthony's experience epitomised the role of unexpected events that has been well documented in the literature (Betsworth & Hansen, 1996; Bright et al. 2005; Hart et al., 1971; Krumboltz & Levin, 2004). The only reason that

he entered the dental technology field was because it offered on-the-job training. He knew nothing about the field nor had any reason to think it might be of interest to him other than the fact that he would be paid while he was in training. Nevertheless, Anthony ended up being reasonably satisfied with the work, particularly in terms of the financial security it provided.

While drifting helped to clarify Anthony's career pathway, the arbitrary nature of drifting meant that those who utilised it sometimes became more rather than less confused (Schwartz et al., 2005). There was also a risk of them becoming so dispirited that they abandoned the challenge of constructing an identity and producing a satisfying career (Carpenter, 2008). That is what appeared to happen for Antoine who became more confounded and dispirited the longer he passively drifted from one experience to another.

Chaos-oriented approaches advocate more agentic styles of career decision making than drifting (Gelatt, 1989, 1991; Gelatt & Gelatt, 2003; Krumboltz & Levin, 2004; Mitchell et al., 1999; Pryor et al., 2008). There are dangers associated with drifting for extended periods of time in that a young person may gain little in the way of credentials and marketable skills. This was underscored by Adrian's experience. He lamented that he had spent the decade after graduating from secondary school doing a series of itinerant jobs. At the time of the interview, he was working in a low-wage job as a mechanic's assistant because he had no formal qualifications. As a result of drifting for ten years, Adrian had accumulated little in the way of human capital since leaving secondary school and as a result had limited job opportunities (Beaujot, 2007; Bynner, 2005). Rather than waiting passively for something to happen, chaos-oriented approaches to career development promote flexible planning (Gelatt, 1989; Gelatt & Gelatt, 2003) and being proactive about working towards desired outcomes in contexts that are uncertain (Mitchell et al., 1999).

Settling. While some used a settling strategy because paid employment was a secondary role in their lives, others employed it because of external circumstances. Family responsibilities or other constraints such as a weak labour market required them to settle, at least temporarily. Mike was illustrative of participants who settled because of external circumstances. He was both qualified and passionate about being a golf course manager but

was not able to find a well-paying job where he lived. Instead, he opted to work as a fisherman's assistant, which was not a job that he liked but one that provided a good wage that allowed him to better support his family. Chaos-oriented approaches provide hope to people in such a situation. Non-linear change means that small changes can have far reaching effects (Hudson, 2000). Jeff recalled that he settled for work as an arborist for three years prior to getting a job as a teacher's aide working with children who had hearing impairments. Despite having no training or experience in the field, he was successful at securing the job after a friend mentioned that his organisation had a position available. Within two weeks, he went from using a settling strategy as an arborist to employing a committing strategy as a teacher's aide.

Committing. Young people who use a committing strategy may be particularly resistant to acknowledging the realities that chaos-oriented approaches emphasise. They enjoy what they are doing so are likely to be keen for things to remain the same. This group may have a propensity to engage in closed-systems thinking, particularly if they navigated straight from secondary school into their present occupation. According to Pryor and Bright (2007), young people who have experienced such a career pathway may be under the illusion that their plans will continue to unfold in a predictable way. In reality, their future pathways are subject to the same unpredictability that applies to all workers. The truth is that young people like Galen can lose a job that they love. Unfortunately, this is a fate that falls disproportionately to workers in their mid to late twenties when there is an economic downturn (Crow et al., 2009).

This section has demonstrated that the five strategies used by participants to find a career-related place can be understood in relation to each of the three career development perspectives presented. While both trait and factor and developmental approaches help to explain participant's experience, chaos-oriented approaches bring a novel perspective to the school-to-work transition (Briggs & Peat, 1999). It is for this reason that the remainder of this discussion will focus on the contribution that chaos-oriented approaches offer to an analysis of the participants' experiences.

Applying Chaos and Complexity Theory to the Process of Finding a Career-related Place

This section applies chaos and complexity theories' tenets of non-linear change and attractor patterns to participants' experiences of finding a career-related place. While most participants experienced at least some degree of non-linear change during the school-to-work transition, their career pathways appeared to become more ordered over time through the influence of four attractor patterns: fixed point, pendulum, torus, and strange attractors.

Non-linear Change

Most participants' narratives contained a search for the answer to the question: "What is the career I want to do for the rest of my life." The presence of a host of internal and external factors influencing young people's pathways is well documented in the literature (see for example, Patton & McMahon, 1999, 2006; Super, 1990). Most participants' narratives included at least one significant unexpected event that either facilitated or hindered their plans. It is this identification of the importance of uncertainty which is among the most important findings of this thesis and supports the integration of principles from chaos and complexity theory into the career development field. For example, the unexpected is what happened to Rachelle who graduated from university with a degree in maths and discovered her passion for being a pastry chef while crewing on a yacht in the Mediterranean. Rachelle's experience resonated with a study of 772 high-school and university students in Australia that found that close to 70% identified at least one chance event as having substantially influenced their career path (Bright et al., 2005).

Pryor and Bright (2003a, 2003b, 2005a) contend that the existence of so many factors qualify career development as a complex system that is subject to non-linear change and unpredictability. The career pathways of many of the participants suggest that Drodge (2002) is correct when he states that unpredictability is normal. From the perspective of chaos and complexity theory, it is impossible to make accurate long term predictions about the career pathways young people will follow (Bloch, 2005; Bright & Pryor, 2003a, 2003 b). Numerous participants pursued education and career pathways that they would not have predicted when they graduated from secondary school. Moreover, non-linear change which is a defining feature of complex systems was evident in many participants' narratives. Off-

hand comments or brief experiences were often the catalyst that created a significant change in their career pathway. For example, Alan decided to pursue public relations as the result of a short conversation with a friend who was contemplating entering the field. He recalled in his interview that working on political campaigns was something that he had enjoyed as a teenager but public relations was a field that was unknown to him. As his friend explained the public relations course, he realised that the field closely aligned with his interest in “selling” a political candidate. As a result of this insight, he made what appeared to others as an abrupt change in programmes from political science to public relations.

Finding Order Through Attractor Patterns

While the emerging adulthood years (18-25) are turbulent for many young people, their career pathways appear to become more ordered as they move into their late twenties and beyond. This is supported by the findings of both Arnett (2004) and the Australian Life Patterns study (Dwyer et al., 2005) that discovered that most young people found a career pathway by the time they were in their late twenties. Chaos and complexity theory offers some insight into how this order may come about. Chapter Three introduced the notion of four types of attractors that chaos theorists have identified which describe how various systems find order over time. The fixed point, pendulum and torus attractor patterns represent the behaviour of classical linear systems (Krippner, 1994) while the strange attractor pattern characterises the behaviour of chaotic systems (Gleick, 1987). The present study provides examples of all attractor patterns other than the torus attractor.

Fixed point attractors provide a basin of attraction to which a system is drawn. Systems that are under the influence of such attractors come to rest with the passage of time (Crutchfield et al., 1986). The messages that participants heard from others acted as fixed point attractors for many. Most participants said that they heard the message that they should begin their tertiary studies immediately after secondary school. As a result, many felt that they had no choice but to enrol at a university or a polytechnic whether they wanted to or not. Some, like Jake, heard messages about specific high-status careers that they should pursue. The implied message from his parents was that his three options were being a doctor, lawyer, or engineer. Jake had no interest in being a doctor or lawyer so

engineering was the only acceptable career option that was open to him. This career goal acted as a fixed-point attractor that organised his career-related behaviour.

The pendulum attractor pattern in which a system moves back and forth was also observed in the study. It occurred when there was a conflict between what others wanted a participant to do and what they themselves wanted. Jeff's career-related behaviour provided an example of the pendulum attractor pattern. He wanted to be a musician but kept vacillating between being a professional musician and applying for a polytechnic programme in the trades as a way of pacifying his mother.

Torus attractor patterns occur when a system repeats the same actions with slight differences and ends up each time in almost the same place that they started. Although there was not a clear example of a torus attractor pattern in the study, I have observed this pattern at play in my clinical work when young people repeatedly rushed into occupations that they knew little about. Tom was a 22-year-old client who took a tourism and hospitality programme immediately after graduating from secondary school. As an 18-year-old, he imagined that his work in the tourism sector would be dominated by cruises to exotic locations but soon found out that he would spend most of his time working at a desk. A few years later, Tom enrolled in an office administration programme believing that it would allow him to manage a business. When he realised that it would only qualify him to work as an administrative assistant, he once again left his programme. Tom was referred to me by an admissions counsellor at the local polytechnic because he was considering taking still another programme that would qualify him for an occupation that was virtually unknown to him. As we explored how he had chosen previous programmes, it became apparent that his anxiety about not knowing what he wanted to do led him repeatedly to make ill-informed career decisions rather than allowing himself to appear directionless for a time.

Some participants' career pathways appeared to be under the influence of a strange attractor pattern. Chapter Three provided a vivid description of the behaviour of a system under the influence of a strange attractor as its movements are tracked on a computer screen. The description is worth repeating as it seems to connote the way some of the participants made the school-to-work transition:

The system careens back and forth with raucous unpredictability, never showing up in the same spot twice. But as we watch, this chaotic behaviour weaves into a pattern. The chaotic movements of the system have formed themselves into a shape. The shape is a ‘strange attractor’, and what has appeared on the screen is the order inherent in chaos. (Wheatley, 1999, p. 116)

This description illustrates the experience of Carol who was featured in Chapter Five as an example of a participant who used an exploring strategy. She was interested in sports medicine at the time that she graduated from secondary school but quickly realised after taking some related polytechnic courses that she was not interested in the field. Carol then took several years off from tertiary education to work in retail. It was there that she discovered her love for customer service and a preference for a fast-paced environment. Based on this self-awareness, she decided to explore a career in office administration by taking a polytechnic programme. During the job practicum, she realised that she loved the organising and planning that was part of being an office administrator. At the time of her interview, Carol was working for a senior executive in a large oil company. She had not decided for sure that she wanted to stay in the job for the long term but was certain that she would continue to pursue work in her chosen field. She had found aspects of her vocational personality that provided order to her career pathway without restricting her to a narrow range of options.

Pryor and Bright (2007) maintain that the four attractor patterns can be categorised in relation to open and closed-systems thinking. They argue that the fixed point, pendulum, and torus attractor patterns reflect closed-system thinking in which career decision makers “simplify reality in an endeavour to achieve order and control” (p. 384). In contrast, a strange attractor pattern corresponds with open thinking which “ultimately defies complete definition, delimitation, and control” (p. 384). There appeared to be a tendency for participants to engage in closed-systems thinking by using a fixed point attractor in the form of definite educational and/or occupational plans during the years immediately after secondary school. This may have been because it quickly brought order to a situation that, according to Pryor and Bright (2007), is confusing and bewildering for many. However, fixed point attractors can lead young people to follow career pathways that are stagnant and

ungratifying (Dodge, 2002). In contrast, the use of strange attractor patterns allow a young person to find enough order to proceed forward without narrowly circumscribing their options. Rather than looking for a fixed point attractor in the form of a specific career goal, it would be more helpful to assist young people in identifying strange attractor patterns by looking for approximations and patterns that show themselves over time (Bütz, 1997). Riverin-Simard's (1998) work suggests that vocational personality may act as a strange attractor that provides hidden order to individuals' career pathways. This will be discussed in more detail in Chapter Eight (p.218).

Using Chaos and Complexity Theory to Challenge the Career Myth

Chaos and complexity theory is also useful in challenging the assumptions that underlie much of the career development field, that career decision making is a point in time event, and even when conceived of developmentally, proceeds in a linear and normative fashion. External factors tend to be overlooked when careers are understood this way. The experiences of participants indicate that this myth can be problematic for young people. This section first discusses the nature of the myth through examples drawn from the participants' narratives. It then examines the impact of the career myth on participants, specifically the problems it creates such as cognitive dissonance, unrealistic expectations about certainty, and anxiety. Finally, this section examines the influence of the myth on the way in which participants employed the five search and engagement strategies. In particular, the career myth seemed to be at least partially responsible for the over-utilisation of the navigating strategy and the under-utilisation of the exploring strategy by participants.

The Career Myth

Despite the contingent nature of finding a career-related place, participants' narratives indicated that there was little acknowledgment from those around them that they were embarking on a process that was emergent in nature. On the contrary, many of the participants in the study received the message that they should have long-term plans and that changing their mind was counterproductive. In this respect, Peavy (2001) has observed that young people are often encouraged to have enduring goals. While most participants were not given this message directly, they, like the participants in McAlpine's (2009)

study, interpreted the many questions about what they were going to do after graduation as an expectation that they should already know. McAlpine also found that young people who were about to graduate from university felt that it reflected badly on them if they did not know what they were going to do after graduation.

Findings here support Peavy's (2001) view that there is a distance between the way many young people, parents, and career professionals think career decision making is supposed to happen and the way it typically occurs. While participants were told that the gold standard of the transition from secondary school was one in which a young person chooses early and follows through, the reality for most was that a sense of place emerged from experimentation with different options and being buffeted by a host of internal and external factors, many of which were chance events. There seems to be a tendency to think that young people who follow through on career plans made in secondary school are somehow more motivated and well informed than those who either do not have plans or subsequently change them. However, examining the experiences of participants who followed through on their plans indicates that there was usually an element of serendipity that allowed them to do so. Many knew little about the path they had chosen and were fortunate that they enjoyed it. Jake's experience is representative of this phenomenon. He entered a computer software engineering programme after secondary school and started a well-paying job in his field immediately upon graduation. By his own admission, he chose computer engineering based on a limited understanding of the field. His primary reasons for choosing the field were that he liked computers and that his father and sister were engineers. Jake indicated that it was competitive to get into software engineering and that he had not initially been accepted but a position opened just as he was about to shift into geomatic engineering. Jake had the good fortune to have a professor who helped him understand more about the software engineering field and gave him confidence that he had the talent needed to be successful. In addition, he received ample emotional and financial support from his parents and was fortunate to encounter a strong labour market when he graduated.

Most young people in the study were not as fortunate as Jake. More typically, participants found that they did not like the option they were navigating toward or that circumstances did not allow them to follow their chosen pathway. For example, Vanessa

had planned since she was in secondary school to become a doctor but was not successful in getting into medical school. As a result, the linear path she had planned to take from secondary school to the completion of a science degree and into medical school veered off course. If Vanessa had been accepted into medical school she would have been one of the “bright lights” to which Carpenter (2008) refers but instead she milled and churned for three years, travelling and experimenting with different jobs in an attempt to find another career path.

Labour market conditions can also disrupt a young person’s plans. A young person may enjoy the work they are trained to do but are not able to find work in their area. This was the case for Anna who was passionate about being an environmental scientist. Despite having the required credentials and three years of work experience, she was not able to secure work in her field. Instead, Anna was working as a manager at a movie theatre at the time she was interviewed. Unfortunately, the current economic crisis will make this scenario more common. In the Australian Life Patterns Study (Dwyer et al., 2001), many of the participants who followed linear paths from secondary school into tertiary education had their career aspirations stymied by adverse economic conditions when they graduated in the mid-1990s.

Figure 7.1 represents the way that many young people and those around them expect the school-to-work transition to occur.

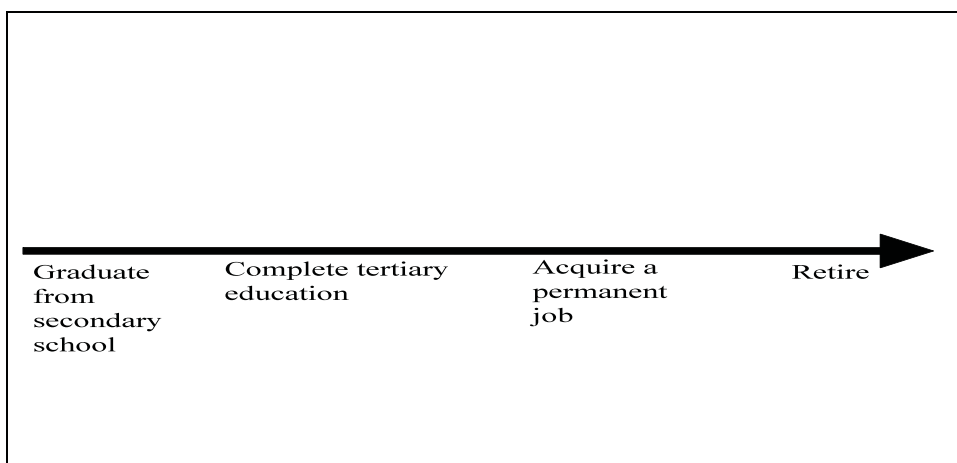


Figure 7.1: The way that many think the school-to-work transition is supposed to occur

Figure 7.2 is illustrative of the way that the school-to-work transition looks for most young people.

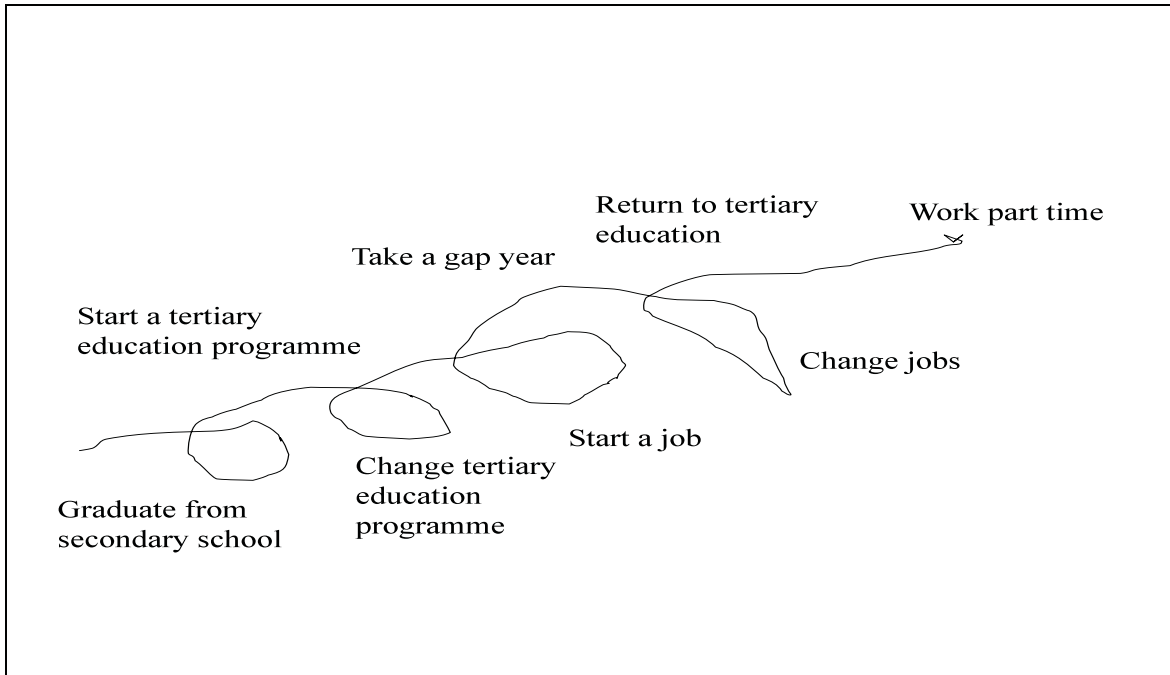


Figure 7.2: The way that the school-to-work transition will occur for most young people

While the expectation is that the school-to-work transition will occur in a linear fashion as represented in Figure 7.1, the reality is that most young people’s career pathway will look more like the one outlined in Figure 7.2. The career pattern outlined in Figure 7.1 symbolises a discourse that creates a powerful expectation that young people follow what Higgins (2002) has referred to as an “extended linear” model of transition in which they proceed from secondary to tertiary education and then directly into full-time employment. Higgins has observed this model of transition is predicated on the fanciful assumption that “the relationship between qualifications and employment is relatively simple: getting a job follows from gaining a qualification” (p.50).

Moen and Roehling (2005) have observed similar normative expectations and have referred to them as a “three-phase lockstep career regime” that assumes a “one-way pathway from schooling through full-time, continuous occupational careers to retirement”

(p. 4). They maintain that these normative expectations buttress a career mystique that makes us believe that personal fulfilment comes from investing one's time, energy, and commitment to continuous full time paid work. For the purposes of this thesis, the normative assumption that people's career pathways (and therefore, the realisation of the career mystique's illusion of work as the single most important path to life satisfaction) should follow a linear pathway from formal education to continuous full time employment and then to retirement will be referred to as the career myth. The findings from this study challenge the veracity of the career myth and its promise of a predictable career pathway that is easily navigated.

Given that most people's career pathways are not linear, it is interesting to speculate on why the career myth persists. It may survive because there are just enough young people who appear to enact it for people to continue to believe it. These bright lights (Carpenter, 2008) and passion honers (Vaughan et al., 2006) follow through on the plans they made when they graduated from secondary school. They have clear goals coming out of secondary school and do not feel the need to explore other options. While findings from this study and elsewhere indicate that this is not the norm (Arnett, 2000a; Dwyer et al., 2005; Vaughan et al., 2006), young people who enact their plans are held up as examples to which others should aspire. A further explanation for the continuing existence of the career myth may relate to the discomfort that many people have with uncertainty (Bloch, 2005; Bütz, 1997). Simply put, the career myth may be something that young people, parents, educators, and policy makers want to believe because it provides an illusion that young people are in complete control rather than subject to the vagaries of life. In turn, the career myth individualises the setbacks that young people often experience as part of the school-to-work transition and leaves them feeling that they are at fault if their career plans falter. There are also discourses and policy practices that support the career myth. In particular, the "knowledge economy discourse" (Higgins & Nairn, 2006) has supported the career myth in its assumptions that there is a direct relationship between gaining qualifications and getting a job.

Impact of the Career Myth

The career myth created problems for participants during the school-to-work transition, these included cognitive dissonance, unrealistic expectations about uncertainty, and anxiety.

Cognitive dissonance. Festinger (1957) developed a theory of cognitive dissonance which posited that if a person holds two cognitions that are inconsistent, they experience dissonance. The career myth tells young people that their career pathways should be linear and leads many to believe that they should have a firm answer to the question: “What are you going to do?” Furthermore, it implies that non-linear career pathways are disordered (Moen & Roehling, 2005). The career myth creates cognitive dissonance for young people, parents, professionals, and policy makers because it is at odds with the circuitous career pathways most people follow. As Festinger observed, dissonance is unpleasant, so people generally find ways to change one or both cognitions to make them consistent with one another.

In relation to the career myth, it would seem that people often deal with the dissonance between the myth and their own experiences by forgetting or ignoring their firsthand knowledge. Many participants in this study seemed to overlook their experience in relation to long-term goals. Although most either did not have goals when they graduated from secondary school or subsequently changed their goals, some still believed at the time they were interviewed that it would have been best to have had long-term goals. This coincides with a study of 17- and 18-year-olds in New Zealand that found that while most believed that it was important for people their age to have goals, most did not have them (Vaughan, 2005). This was not the case for all participants. As with young adults in the Australian Life Patterns Study (Dwyer et al., 2005), some participants in this study learned through their experiences after secondary school that life was unpredictable and that it was best to have flexible rather than set career plans.

Dissonance also features in parents’ expectations about how their children transition from school to work. Between 2002 and 2008, I developed and facilitated a programme called Parents as Career Coaches (NSDOE, 2006) that worked with hundreds of parents to facilitate the development of the attitudes and skills necessary to play a constructive role in

their children's career development. One of the strategies the programme used was to have parents reflect on their own experiences and to think about what it might tell them about the nature of their child's career path. Most parents who participated in the programme either had experienced non-linearity in their own career or knew of peers whose careers were irregular. However, despite knowing otherwise, they expected their children's career pathways to be linear. Dwyer and Wyn (2001) observed a similar type of dissonance between parents' expectations that their children's careers would be linear and their intellectual understanding that this was not the norm. Bloch (2005) offered insight into the genesis of this dissonance when she observed that many people experience the vagaries of their career as illogical yet believe that this is not the norm. As a result, they do not share with others (including their children) the fact that their career pathway was more circuitous than it might appear.

The concept of cognitive dissonance has been applied in a number of fields including social psychology, education, and social work. Bolland and Atherton (1999) have observed that in social work practice, dissonance has resulted from the implementation of "deterministic practice" when workers have always known that "things were more complex than linear cause-and-effect reasoning suggests" (p. 371). Over the past few years, I conducted a number of workshops and conference presentations as part of reporting the findings of this study. During these sessions, it became apparent that there was sometimes dissonance between what guidance and career counsellors knew about how young people's career pathways unfolded and the interventions used to assist them make career plans. In this regard, one secondary school guidance counsellor said that she knew from experience that most young people who engaged in navigating toward a specific occupation immediately after secondary school would not end up in their chosen occupation. Despite knowing this, she acknowledged that when a secondary school student appeared to know what they wanted to do, she focussed on ensuring that they were taking the required courses rather than exploring with them what the counsellor knew about the student's chosen field or what other options they might want to consider.

Most of the policies related to the school-to-work transition are based on the career myth, despite the fact that this was not what typically occurred for the policy makers themselves or for those around them (Dwyer et al., 2005). This dissonance was highlighted

in the findings of a recent secondary school graduate survey that was conducted in Nova Scotia over a period of ten years (NSDOE, 2007b). Surprisingly, it found that 62% of graduates pursued the occupations that they had chosen at the time they graduated. The findings were mystifying as they ran counter to my own findings and those of qualitative studies conducted in a number of western countries. Upon further investigation, it became apparent that the researchers had determined that a participant had followed their long-term plan if they graduated from the tertiary education programme they had initially chosen. Researchers had not, however, asked respondents whether their chosen programme aligned with their expectations or translated into work directly related to that qualification. Unfortunately, the research confirmed the mistaken belief of policy makers that the majority of young people follow linear pathways. This belief in turn led them to think that young people should be certain about their career pathways.

Unrealistic expectations about certainty. The career myth creates unrealistic expectations about the level of certainty young people should have about their education and career plans (Bloch, 2005; Drodge, 2002; Pryor & Bright, 2007). Consider Nora who experienced a crisis when she did not get into a graduate programme in clinical psychology. It had not occurred to her that she might not be accepted into the programme because she had always been a good student and had been told by others that her plans were commendable. Nora was engaged in what Pryor and Bright (2007) refer to as closed-systems thinking which is characterised by a strong sense of personal control and a belief that the unexpected will not happen. According to Pryor and Bright, the bewilderment and frustration that Nora experienced was typical of people who experience change that they had not anticipated.

The expectation of certainty sometimes leads young people to engage in “mindless optimism” (Pryor & Bright, 2006). While optimism is a useful approach in an uncertain world (Arnett, 2000b), it can blind young people to the reality that their achievements, traits, and personality characteristics are only part of the career development equation (Reynolds et al., 2006; Schneider & Stevenson, 1999). The fact that many young people ignore this reality was highlighted in a recent newspaper article by a columnist in her late twenties who wrote that the strategy of many young people of her generation in the face of

the biggest economic downturn since the Great Depression is to “close our eyes and plug our ears and hum ‘Mary Had a Little Lamb’ til it's over” (McLaren, 2009, L1).

Perhaps the most insidious consequences of the expectations of certainty is that it “responsibilises” (Vaughan et al., 2006) young people. In the RRC study, several participants had grown up in disadvantaged socioeconomic circumstances and held themselves personally responsible for their lack of success in finding a suitable career. Evans (2007) also found this to be true of young adults in Germany and Britain.

Anxiety. Given the pervasiveness of the career myth, it is little wonder that anxiety featured in many of the participants’ narratives. Those who had not made up their minds were anxious to find an answer to the incessant questions about what career they were going to pursue. Some who had made choices wondered if they were the right ones. Others expressed a sense of confusion and anxiety when their plans did not work out in the way they expected.

Peavy (2001) attributes much of the anxiety young people experience to the pressure put on them to have specific, long-term goals. When a young person does not have such goals, they are often criticised, even when they are actively exploring their options. Like young people in the Australian Life Patterns Study (Dwyer et al, 2005), many participants in the present study experienced admonishments if their plans changed. It was like that for Emma who took time after completing an undergraduate university degree to consider her future and was told by her friends and family members that she was misusing her time and that she was going to ruin her life if she did not get her life "on track." She had been an honours student and was simply taking a year off to consider her options rather than embarking on a career pathway that she was not sure about. However, Emma’s choice to explore was undermined by the reaction of others. She became anxious about not having a plan even though she was sure that she would have been unhappy if she had entered a graduate or professional school just to find an answer. Moen (2009) has pointed out that when a young person compares their career pathway to normative assumptions, most will perceive theirs to be disordered. It is little wonder that some participants’ narratives included an experience of what Krumboltz (1993) has referred to as zentophobia, the stress, fear, and anxiety associated with career exploration.

Krumboltz (1992) also maintains that procrastination is another way in which young people's anxiety about their career pathways manifests. Although there were not clear examples of participants procrastinating about decision making in the current study, it may be that they were retrospectively making sense of what at the time might have been procrastination by reframing it with the benefit of hindsight as more intentional than it was at the time. In my clinical practice, several young adults have told me that they were afraid to make a career decision in case it was the wrong one. The career myth leads young people to believe that they have to ensure that their career decisions are right at the outset. This expectation makes it difficult for young people to engage in the exploration that is needed for what Vaughan and Roberts (2007) refer to as the "dual 'production' of identity and career" (p. 91). Many participants indicated they would have liked to take time off to explore their options prior to enrolling in or finishing tertiary education programmes but did not because of the anxiety-producing criticism they would have received from others.

This section has highlighted the fact that it takes time for most young people to find a career-related place after graduating from secondary school. Despite the fact that it is difficult for young people to make long-term career plans with any certainty, the predominance of the career myth leads them to believe that they should have such plans. This incongruity creates a host of problems for young people including anxiety and unrealistic expectations about the nature of their career path.

Impact of the Career Myth on Strategy Utilisation

The anxiety experienced by some participants as a result of the career myth was often part of the reason that they made poorly considered choices. As noted earlier in this chapter, it was not uncommon for young people to utilise a navigating strategy despite knowing little about their chosen option. The social pressure that embodies the career myth spurred them to make choices that they were not ready to make. Moses (2003) has observed that "a lot of kids are forced into making career choices when they don't have the basis for making those career choices. They think that there is something wrong with them if they don't have a clear career direction" (para.17). Rather than spending time investigating whether a choice was a good fit, some participants were so concerned about not knowing what they wanted to do that any choice was better than not having a plan. The utilisation of

the navigating strategy allayed the concerns of others and sometimes their own lack of tolerance for ambiguity. Rachele's account of this in Chapter Six is illustrative:

The pressure to know what you're going to do with the rest of your life is pretty great. That's the one question that everyone kept asking me. I found that to be almost debilitating because I didn't know and everyone kept asking. I pretty much took the first job that I was offered because I thought, if I had a job, then that would be the answer. I wouldn't have to answer what I wanted to do with my life.

In other cases, it appeared that participants used the navigating strategy as a way of managing the influence of the career myth. Some proclaimed career pathways that were a façade while they engaged in drifting or exploring. This could be seen in Julie's narrative. At the time of secondary school graduation, she was not clear about what she wanted to do. Although her preference was to take time out before starting tertiary education, she started an undergraduate university programme in business because of pressure from her parents. This bid to pacify her parents was necessary because she, like most other participants, did not have the resistance skills when she graduated from secondary school to defy her parents' wishes. While her parents believed that she was navigating toward a career in business, Julie seemed to be using a drifting strategy as she had no interest in a career in business. After doing poorly academically in her first year, she began exploring social science courses that were of interest to her without telling her parents. Strategically, she controlled the information that she shared with her parents as a way of avoiding criticism from them. Through taking a sociology course, she became interested in a career in social work. She allowed her parents to continue thinking that she was navigating toward a career in business despite the fact that she was actively exploring a range of options in the social work field by doing volunteer work.

Given the powerful hold of the career myth in popular discourse, it is tempting for university graduates with good marks to deal with the pressure of knowing what they want to do by pursuing graduate studies. It was like that for Chris who received a scholarship to do a Masters degree that paid for all of his tuition and living expenses. He explains what motivated him to continue studying:

When I did my undergrad, I did a few co-op work terms and they provided very low job satisfaction. I don't even really know why I did computer science. Like, I never owned a computer in my life. I always did well in school so one of the professors said I should apply for a scholarship for graduate school. I got a full scholarship, so school was for free anyway. I ski a lot and there's a lot better skiing in Calgary. I could go anywhere, so I decided to go to university in Calgary. I just wanted to see what Calgary was like.

The use of the navigating strategy would seem to represent a way that some participants implemented exploring or drifting strategies in a clandestine fashion that avoided having to confront negative reactions from others. This may have given them time to identify what they really wanted to do or to develop the resistance skills they needed to follow career pathways that their parents did not support. Julie's parents were not supportive of her eventual decision to become a social worker but in the intervening years her resistance skills grew to a level that allowed her to follow her desired career pathway. This was also the case for Dylan. By enlisting the support of his aunt and sister and gaining confidence in his choice, he was able to pursue a career as a hair stylist despite his parents' disapproval. The covert use of the exploring and drifting strategies suggests that the utilisation of these strategies are likely more prevalent than is commonly thought. This corresponds with Krieshok's (2001) observation that young people often appear to have made a career decision when in fact they made a choice only because circumstances required them to do so. Unfortunately, the covert use of exploring and drifting strategies reinforces the career myth to the extent that young people outwardly express their behaviours as navigating which then serves to reinforce the normative view of the school-to-work transition.

The career myth also appeared to lead to the underutilisation by most participants of an exploring strategy in the immediate years after secondary school. It was often difficult for participants to employ an exploring strategy because of the demands to start tertiary studies directly after secondary school. Several participants noted that they were encouraged to go on to tertiary education despite their desire to take an interlude in order to get a better sense of what they wanted to do. A number of participants observed that

exploring was tolerated within the confines of a tertiary institution but was frowned upon once they graduated. A graphic example of this dynamic was shared by Jeff in Chapter Six:

You have that huge explorative phase when you're in university, if you do go to university, and you want to get out and live life and then after university people start asking you, well what are you going to do, what are you going to do, what are you going to do and then I think that just puts pressure on people to quickly decide or maybe not get to know themselves well enough to make an informative decision. That, this is a decision based on my future happiness, not just a decision based on I have to make a choice and I've got to make it sooner than later.

For Jeff, it was deemed to be acceptable to those around him to explore through taking a variety of courses while attending university. However, the assumption that a young person has an opportunity to explore different types of career opportunities while at a tertiary institution may be ill-conceived. Although attending a tertiary institution facilitates identity exploration, it is questionable the degree to which it allows a young person to explore the realities of an occupation. Gray (2000) has pointed out that tertiary level programmes are not optimal places to engage in career exploration because they are generally detached from the realities of working in particular occupations. The exception to this is programmes that offer job placements as part of their curriculum. However, job placements in Canadian tertiary institutions typically occur after students are well along in their studies. By that point, they may have invested so much time and money that they do not feel that they can leave. This was true for several participants who noted that there was pressure to complete a programme even after they realised they did not like the occupations for which they were training.

Consideration of the interaction of the career myth with strategy utilisation can have significant implications for career practitioners. While it may seem at first glance that young people are simply poorly informed when they make bad career decisions (Grubb, 2002), this study suggests that many utilise a navigating strategy as a way of avoiding the anxiety and criticism that often accompany deviations from linear pathways after secondary school graduation. Thus, the provision of information to poorly informed navigators may

be helpful but it is certainly not sufficient. More information may lead them to conclude that a particular option is not a good fit. However, they are still left with the pressure of the career myth to have a long-term career plan. Unless they are given help challenging the career myth, they will likely begin navigating again toward another career path that they know little about if their original plan does not work out. Correspondingly, young people will largely refrain from overtly using an exploring strategy until the power of the career myth diminishes significantly.

Conclusion

This chapter discussed the uncertainty that participants faced as they endeavoured to find a career-related place and the various strategies they engaged in as part of this process. The vicissitudes of their career pathways can be accounted for at least partially through chaos and complexity theory which views uncertainty and change as the nature of reality rather than an aberration. The career myth, which appears to exert a powerful influence on young people's expectations and those around them, stands in opposition to the view that change is normal in relation to young people's career pathways. In this regard, it complicates the school-to-work transition for young people because it pathologises the non-linear career pathways that are the norm for most.

There appears to be a connection between the career myth and the ways that participants employed the five career search and engagement strategies identified in this research. Those who navigated with little information about their chosen pathway were paradoxically putting themselves at risk of poor outcomes by doing what was expected of them. In particular, they ran the risk of gaining the qualifications for an occupation that they may eventually experience as unsatisfying. Compounding this problem was the tendency for guidance counsellors and career professionals to assume that young people who were navigating did not require their assistance because they had plans in place. Those who used an exploring strategy faced a different paradox. Although they were engaging in activities that were developmentally appropriate, they were criticised for doing so because their lack of a career plan contravened the career myth. The criticism that young people face when using an exploring strategy is unfortunate because the use of this strategy fosters the identity exploration and career production that is central to young people finding

satisfying work and building a strong sense of identity. Moreover, an exploring strategy promotes open-systems thinking that allows young people to respond more effectively to changing circumstances.

Ideally, exploring would be the primary strategy that young people use in the immediate years after secondary school. However, this will not occur until the career myth and the trait and factor approach are supplanted by an alternative discourse. To this end, the next chapter will discuss the importance of accentuating developmental and chaos-oriented approaches while at the same time de-emphasising trait and factor approaches. It will also highlight six career design principles that can act as an antidote to the dictums of the career myth by providing guidelines for working with the unpredictability and uncertainty that is inherent in most young people's school-to-work transitions.

Chapter Eight

Career Planning in a Changing World

Introduction

The findings from this present study clearly indicated the contingent nature of many participants' career pathways. These findings are supported by developmental and chaos-oriented approaches to career development which view changes in young people's career pathways as normal. However, as the previous chapter highlighted, many subscribed to the career myth that contends that young people should aspire to linear career pathways. The persistence of this career myth may be partly related to the fact that no alternative understanding has placed itself in the public consciousness. Young people and the people who support them would benefit from understanding that change and uncertainty characterise the school-to-work transition. Moreover, there is clearly a need to have a range of techniques to support young people in working with both the affective and cognitive aspects of unpredictability and non-linear change in relation to their career pathways. With this in mind, six career principles are offered in this chapter as a viable alternative to the career myth.

This chapter begins with a discussion of the need to bring developmental and chaos-oriented approaches to the foreground, and move trait and factor approaches to the background, when explaining school-to-work transitions. The chapter next considers the ramifications of such a shift for career practitioners, including a modified role for the use of vocational personality as a means of assisting young people to choose career pathways. Following this, six career design principles are presented that provide young people with guidelines for how to work with the ambiguity and uncertainty that is inherent in the school-to-work transition.

Deemphasising Trait and Factor Approaches to Career Development

The previous chapter highlighted the powerful role that the career myth plays in the ways that young people, parents, professionals, and policy makers think that career development occurs. Given that, it is not surprising that the trait and factor ethos dominates the public's thinking about the school-to-work transition. If young people and their parents

believe that career pathways are supposed to be linear and unchanging, it follows that they would presume that it is possible to be matched with a suitable career. Kreishok (2001) has observed that career professionals may support this belief when their primary intervention is to administer a battery of career inventories.

As discussed in the previous chapter, developmental and chaos-oriented approaches directly confront the positivist underpinnings of the trait and factor approach. These theories indicate that the notion that young people should choose career pathways in secondary school and follow them in a linear fashion is nonsensical because of the imperatives of identity development and the existence of many factors that impact on these pathways. In many ways, the developmental and chaos-oriented approaches appear to have more explanatory power in terms of both the linear and non-linear pathways followed by participants in this study. Kirsten followed a linear pathway from secondary school to a career as an engineer. However, there were many factors that made this possible. Not only did she have the ability, motivation, and financial resources to complete an engineering degree, Kirsten was also fortunate enough to graduate at a time when, and place where, there were many jobs for chemical engineers. In addition, she had the advantage of going to a secondary school that provided weekly meetings with a teacher-advisor who was able to help her connect her interest in chemistry and applied work and a career in chemical engineering.

A chaos-oriented approach to career development explains a linear pathway like Kirsten's by suggesting that, while a young person who follows their career plan lockstep from secondary school into the workforce may appear to be in complete control, they were actually not (Pryor & Bright, 2007). Kirsten did not have control over the amount of guidance she received while in secondary school nor the labour market opportunities that were available when she graduated from secondary school. Prior to meeting with her teacher-advisor, she had planned to take an undergraduate degree in chemistry. While she may have eventually chosen chemical engineering, it would not have been such a direct route without the assistance she received from her teacher-advisor. Similarly, if she had not been able to find employment as a chemical engineer soon after graduating, she may have chosen to retrain for another career. Pryor and Bright (2007) have observed that while pathways like Kirsten's appear to operate within a closed-system, they in fact unfold within

the reality of an open system. That is, it appeared that Kirsten had complete control because her plans worked out. However, this does not change the reality that there were many factors outside of her control that could have forced her to change her plans. Indeed, as she moves forward it may well be that circumstances beyond her control mean that she cannot continue on such a linear pathway.

Non-linear pathways can be explained by developmental and chaos-oriented approaches. From the perspective of both approaches, change is normal. Take for example Maggie's career pathway. At the time of secondary school graduation, Maggie believed that the only thing she was capable of doing were low-skilled jobs because of her poor secondary school marks and low self-esteem. However, her success in an office administration programme and stellar work at a subsequent job in a call centre began to change the way that she saw herself. Instead of viewing herself as being inept, Maggie began to see herself as someone who had good problem solving skills and strong interpersonal competencies. As her identity transformed, she began to find her work at the call centre less satisfying. Accordingly, she began to investigate alternative career pathways, eventually deciding to pursue a health care profession. While taking a biology degree, a friend told her about a summer internship programme that was available for those interested in doing environmental work. Maggie knew little about what environmental scientists did but took the job because it paid a good salary. Much to her surprise, she really enjoyed the work and decided to pursue a career as an environmental scientist. At the time of the interview, Maggie was working as a lab assistant doing environmental research. However, she was beginning to reconsider her career choice and was thinking about applying for medical school as a result of experiencing significant health issues.

From a trait and factor approach, Maggie did a poor job of matching her vocational personality with a career when she graduated from secondary school. However, developmental and chaos-oriented approaches would view her pathway quite differently. From a developmental perspective, her changing career aspirations are explained by the transformations that occurred in her identity. Maggie indicated that being an environmental scientist or a medical doctor were not careers that she would have thought herself capable of doing when she graduated from secondary school. From a chaos-oriented perspective, the seemingly insignificant incident of her friend mentioning the summer internship

programme launched her career in environmental science. This pattern is explained by the butterfly effect, a central principle of chaos theory. It posits that chaotic systems are sensitive to seemingly minor changes that reverberate through the system to create major alterations (Briggs & Peat, 1999; Gleick, 1987).

The superior explanatory power of developmental and chaos-oriented approaches does not mean that the trait and factor method should be disregarded. It has an important role to play in assisting young people with the school-to-work transition, albeit a secondary one (Cochran, 1997; Savickas, 1993). The following analogy might help in explicating what it would look like if trait and factor methods were to play a secondary role in relation to chaos-oriented and developmental approaches. In the famous perceptual illusion that is commonly found in introductory psychology texts, our minds can switch between seeing a young girl and seeing an old woman. In general, the career counselling field views the trait and factor approach in the foreground while the developmental and chaos-oriented approaches disappear into the background. Many career practitioners in Canada discuss the High Five Messages (Redekopp et al., 1995) that emphasise “change is constant,” while career guidance services continue to believe that their task is to help young people identify and commit to long-term career pathways. Both developmental and chaos-oriented approaches provide compelling arguments for moving uncertainty and unpredictability to the foreground and trait and factor approaches into the background. From the perspective of chaos and complexity theory, uncertainty and unpredictability are the nature of reality in the labour force.

Young people would be well served by a change in emphasis. If parents, professionals and policy makers were to accept the tenets of chaos and complexity theory, the distance between expectations and the realities of young people’s school-to-work transition would narrow. With more realistic expectations about the contingency of their plans, young people would likely experience less anxiety. Moreover, as counselled by Krumboltz (1992) and Miller (1995), they would recognise that saying “I don’t know” or “I’m not sure” about their career pathways are sensible answers. As a result, they would be less prone to procrastinate or to proclaim a career destination about which they know little. While young people would in all probability continue to use a range of strategies to find a career-related place, what would change, one would hope, is the proportion of young

people using the navigating as compared to the exploring strategy in the immediate years after secondary school. If chaos and complexity and developmental approaches to career development were brought to the foreground, it would be easier for young people to explicitly use an exploring strategy because there would not be an expectation that they have a long-term plan.

Although the role of the trait and factor approaches would be diminished if it were moved to the background, it would still have an important part to play in facilitating the school-to-work transition. A key tenet of chaos and complexity theory is that there is order in the apparent chaotic behaviour of complex systems (Briggs & Peat, 1989; Capra, 1996; Gleick, 1987; Stewart, 1989). Riverin-Simard's (1998) work on the experiences people have with vocational chaos suggests that vocational personality is a strange attractor that provides hidden order to individuals' career pathways. In this regard, it was notable that for participants who did receive guidance, the thing they identified as being most helpful was assistance in connecting their interests, skills, or values to possible career options. In other words, someone helped them understand how their vocational personality might inform career decision making. Several participants like Kirsten and Galen were able to navigate directly into suitable careers based on this matching process. However, the method used by their advisors did not take into account that they were operating in an open system. It emphasised the end-point rather than the process itself. If the careers they had been matched to had not worked out, these participants would likely not have had the tools to proactively go about finding another suitable option as was the case with Galen.

The strength of the trait and factor approach is the emphasis that it places on identifying people's vocational personality. Its weakness from a chaos and developmental perspective is the focus it places on making long-term matches between individuals and careers. Ideally, advisors would dispense with the objectivist underpinnings of trait and factor approaches while retaining its methods for identifying vocational personality. Qualitative assessment tools such as the Pattern Identification Exercise (Amundson, 2003a) could be used to help young people query their experiences to elucidate their interests, values, and talents. Standardised assessment tools such as the Strong Interest Inventory (Strong et al., 1994) would serve as means to confirm, question, or broaden a young person's understanding of their interests. In this regard, the goal of using a tool like the

Strong Interest Inventory with young adults becomes one of increasing their understanding of their vocational personality rather than on identifying a specific occupation to pursue.

If trait and factor approaches were used secondarily to developmental and chaos-oriented methods, advisors who provided guidance to Kirsten and Galen would have placed less emphasis on helping them to identify long-term career goals through matching their vocational personality with a suitable occupation. Instead, as recommended by chaos theorists, the focus would have been on assisting them to identify patterns and themes in terms of what constitutes satisfying work for them. These elements are representative of young peoples' vocational personalities. For example, patterns and themes such as working with their hands, organising things, or solving problems may have emerged as they reflected on what they had enjoyed in the past. The more they pondered their experiences, the clearer they would have become. These patterns and themes could then provide them with reference points for incremental career planning (Butz, 1997; Pryor & Bright, 2007). If Kirsten or Galen had not been able to carry out their initial career plan, their reference points would have provided a way of assessing alternative options and making their next career step.

An important caveat from a developmental perspective is that their vocational personality will likely evolve over time. However, the broad strokes of vocational personality have been shown to remain remarkably stable (Low et al., 2005; Rottinghaus et al., 2007). For example, young people who are predominately "social" according to Holland's (1973, 1997) vocational personality types will probably always be interested in working with people. However, the particular way this interest manifests over time may change as their identities evolve.

The next section introduces six career design principles that provide young people with guidelines on navigating the complexity and uncertainty that characterises the school-to-work transition for most.

Career Design Principles

If developmental and chaos theory were to move to the foreground, helping young people work with the uncertainty inherent in the career planning process would become central to career practitioners' work. Paramount to this endeavour would be assisting young

people to plan while remaining open to change (Gelatt, 1989, 1993). Young people need direction on how to engage in flexible planning that goes beyond platitudes such as “change is constant”, “follow your heart” or “focus on the journey” which are part of the High Five Messages of Career Development (Redekopp et al., 1995). Knowing that change is constant is not particularly useful for young people when they are confronted with expectations that they should have long-term linear career pathways and feel the need to make a decision. Nor is the encouragement to focus on their journey much assistance to a recent secondary school graduate who is paralysed by anxiety over making a wrong choice.

While the flexible planning advocated by a chaos-orientated approach to career development sounds good in theory, it is not clear what it means in practice. What does a young person do when they have important career related decisions to make after secondary school graduation? What choice do they have except to make a tentative long-term career plan? In this regard, Plsek and Wilson (2001) counsel that minimum specifications provide guidance for taking action amid the unpredictability of a complex system by providing a few simple guidelines that maximise the chances that creative progress will be made toward a system’s goals. Plsek and Wilson assert that identifying a set of minimum specifications provides a sense of direction and boundaries rather than specifying particular actions. These minimum specifications provide a middle ground between too little organisation, which impairs efficiency, and too much structure, which makes it difficult to take advantage of new opportunities (Brown & Eisenhardt, 1998). This middle ground between chaos and order allows young people to teeter at the edge of chaos where, according to Kauffman (1995), systems thrive by making multiple adaptations prior to returning to a steady state.

Based on the findings of this research, six career design principles have been identified that can act as minimum specifications for helping young people engage in the process of finding a career-related place. These career design principles emerged from an analysis of the data, a comprehensive review of the literature, and reflection upon my own experimentation in my clinical practice with chaos-oriented approaches to career counselling. Underlying the career design principles is the assumption that “uncertainty is part and parcel of career decisions” (Miller, 1995, p. 165). This understanding can free young people from the untenable expectation that they should have long-term career goals

when they graduate from secondary school. At the same time, the principles stress the importance of finding the order that chaos theorists profess exists in the disorder which characterises complex systems (Capra, 1996). This hidden order comes from an understanding of one's vocational preferences that can in turn be used to guide education and career decision making (Riverin-Simard, 1998). The career design principles provide guidance on how young people can be comfortable with uncertainty and unpredictability, while at the same time offering strategies that promote proactive behaviour. They act as an antidote to the career myth without leaving young people feeling hopeless. The career design principles also promote open-systems thinking that Pryor and Bright (2007) advocate, normalising unpredictability and emphasising that young people are not in complete control of their career pathways.

The six career design principles are explained with the help of case scenarios. These cases are not specific to the study but are rather composites of young people that I have worked with in my clinical practice and those who participated in the study. The use of cases allows me to explain more fully how the principles can be translated into career counselling practice by elaborating on how they might be used in situations that career counsellors often face. The career design principles are as follows:

1. *Develop a set of criteria to guide decision making*: Identify interests, preferences, and values that can act as reference points for career decision making.
2. *Balance dreaming and reality*: Investigate both dreams and the realities of putting dreams into action.
3. *Do what you love somewhere in your life*: Making a living and living one's passion are not necessarily the same thing.
4. *Find the next career step rather than a destination*: Focus on next steps rather than long-term plans.
5. *Approach career goals with positive uncertainty*: Career planning is helpful, but rigid goals can place artificial limits on the options available to an individual.
6. *Expect to be uncomfortable*: Become comfortable with being uncomfortable.

Principle # 1 – Develop Criteria to Guide Decision Making

Earlier in this chapter, the point was made that chaos-orientated approaches to career counselling utilise vocational personality in a different way than trait and factor methods. Instead of using it as the first step in a matching process, the elucidation of a young person's vocational personality is viewed as a compass for incremental career decision making. As qualitative and quantitative assessment tools are used, a “shopping list”³⁰ develops for a young person. The shopping list is a summary of the patterns of values and interests that are most important to a young person. They represent the strange attractor patterns that show themselves over time. The items on the list serve as criteria by which a young person can assess the desirability of a particular career. Having such criteria will make it more likely they choose an option that fits as opposed to pursuing a career which is readily available (Schwartz, 2004). Furthermore, young people who have a shopping list may realise that none of the choices being considered fit and that they will need to generate more options. The efficacy of this approach was found by researchers in the New Zealand Pathways and Prospects study who observed that participants who were pursuing a pathway that was of interest to them seemed to have developed a set of criteria that was guiding their career decision making (Vaughan et al., 2006).

Case example: At age 25, Jen came to career counselling because she was dissatisfied with her work as an administrative assistant. She had worked in the field for four years and had found the work tolerable but not very satisfying. She was considering a number of career options including social work, nursing, teaching, and police work. Jen indicated that she was overwhelmed by the choices and was unsure about how to proceed.

Prior to seeking out counselling, Jen had not determined any criteria for making a career decision. As with many of the participants in the present study, she was unclear about what was important to her in terms of a career. Counselling focussed on helping her develop a set of criteria that would help guide her career-related decision making. A

³⁰ I have borrowed this term from Career and Transition Services which provides career counselling services in Halifax, Canada. It is used extensively in their work as a way of delineating the elemental pieces that constitute satisfying work for clients.

shopping list was developed by having her work through a process that was modelled on Amundson’s (2003a) pattern identification exercise in which clients’ life experiences are used to elicit patterns and themes. Jen was asked to identify experiences both in the past and present that she had found particularly enjoyable. The counsellor then asked her to reflect on what she found so appealing about each experience. Jen was also asked to ponder activities that she strongly disliked. In this regard, it is helpful for young people to identify their dislikes since they need to understand what to avoid, along with knowing what they would find interesting and enjoyable. Having young people reflect on negative experiences can be quite effective because, as Carpenter (2008) notes, they often find it easier to identify what they find undesirable rather than what they like. As the result of deliberating on a number of positive and negative experiences along with the administration of the Strong Interest Inventory (Strong et al., 1994) and the Myers Briggs Type Indicator (Myers, 1987), a list of criteria began to emerge that is detailed in Table 8.1. The criteria with asterisks beside them represent those that were most important to Jen.

Table 8.1

Jen’s Criteria for Career Decision Making

<ul style="list-style-type: none"> • Time for friends and family* • Opportunity to try/learn new things* • Lots of interaction with people* • Learning about how people’s minds work • 9-5 work hours* • Like writing • Lots of structure 	<ul style="list-style-type: none"> • Outdoor recreation* • Make a difference in people’s lives* • Minimal amount of administrative details • Travel * • Variety of activities* • Dislike maths • Dislike personal conflict
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Having a list of criteria in the form of a shopping list is helpful for young people hoping to understand why particular options might or might not fit. The shopping list provided Jen with insight into why her job as an administrative assistant was not satisfying. Although the job met her criteria in terms of interaction with people and regular work hours, it did not give her a sense of making a difference in people’s lives. The counsellor then helped Jen apply her criteria against the career options that she was considering. While

nursing and police work met some of her key criteria, they did not support her desire to work regular hours, at least initially. While she recognised that over time it might be possible to find nursing or police roles that provided regular work hours, Jen decided that it would be preferable to find an occupation where regular work hours were the norm. The counsellor suggested that she might want to consider a health profession that would give her more regular hours than nursing. Jen began to think about physiotherapy as a possibility. The more she learned about physiotherapy the more she thought it might fit the criteria that were paramount to her. It became the path she began to work towards. However, she was also aware that social work and teaching may adhere with her criteria reasonably well. If her plans to pursue physiotherapy changed, Jen indicated that she would consider social work and teaching as other career possibilities.

The shopping list provided a set of criteria that Jen used as a reference point for career decision making. However, the counsellor stressed with her that it would be difficult to find an occupation that met all of her criteria. For example, there are few jobs in outdoor recreation that provide regular work hours. However, the fact that outdoor recreation was identified as a significant interest area meant that it was important for Jen to incorporate it somewhere in her life if she was not doing it as part of her paid employment. Later in this chapter there will be further discussion on how young people can fulfil criteria in other parts of their lives that are not met through their paid employment.

Jen accrued a number of benefits from establishing a set of criteria that were represented by her shopping list. Perhaps most importantly, she became less anxious about making a career choice once she had a set of criteria. As Schwartz (2004) has argued, having reference points for making career choices makes it less overwhelming because individuals have a way of evaluating the options that are available to them. Having a set of criteria also facilitated the utilisation of an exploring rather than a drifting strategy. Knowing that she liked a lot of interaction with people made her more intentional about looking for options that fit these criteria. As a result, she was more likely to be what Schwartz refers to as a “chooser” than a “picker”. A chooser has a set of criteria by which to evaluate options while a picker selects from whatever is readily available, often with little consideration given to whether or not their choice fits. Knowing why physiotherapy was a good choice gave Jen confidence in her decision to pursue it.

It is important for young people to be aware that the criteria they develop at a particular point in time will likely be revised as their identities evolve and their life circumstances change. What was important to Jen in her mid-twenties may not be as critical a few years later. Moreover, new criteria related to geographic location may develop if she becomes involved in a serious relationship. The evolution of criteria speaks to the need for young people to update their shopping list on a regular basis. This would be useful for a young person during their late teens and early twenties when their identity is most in flux. It would be particularly beneficial to review their criteria during times they are going through major life transitions such as getting married, having children, or losing a job.

Principle # 2 – Balance Dreaming and Reality

Young people often seem to dream with little reality checking or be so focussed on reality as they perceive it that there is little room for dreaming (Sher, 1979). As was discussed in the previous chapter, it was not uncommon for participants to navigate toward options that they knew little about. For those who employed a navigating strategy, there seemed to be little awareness that their dreams were unfolding in a situation that was characterised by bounded agency (Evans, 2007). It is common for young people to have unrealistic expectations about their future career attainments (Reynolds et al., 2006; Schneider & Stevenson, 1999). Several participants in this study noted that they were not aware of how competitive it was to gain acceptance into programmes like medicine or clinical psychology or were led to believe that if they tried hard enough they would be sure to be accepted. Furthermore, like participants in the Australian Life Patterns Study (Dwyer et al., 2005), some participants gained the required training to follow their dreams but were subsequently unable to find a job in their fields.

In some cases, a young person may not have the aptitude needed to succeed in their desired field. While intuitively it makes sense that passion and talent go hand in hand, it is not necessarily always the case. Although there is a significant correlation between interests and abilities (Sharf, 2009), passion does not ensure talent nor does talent ensure passion (Chang, 2000). A young person may have a passion for something but may not

have the ability needed to turn that passion into a career. It is hard for career practitioners to acknowledge this when faced with the eagerness of a young person with a dream.

Case example: At age 23, Drew came to career counselling because he was unsure about his next career step. He had tried three times to pass the entrance exams for the police academy. Three times he had failed. On one hand his failure was unexpected. Drew is a personable, fit young man with a black belt in judo. He had been in the army cadets as a teenager and loved the physicality of the training and the feeling that he was part of something important. But school had always been a struggle for him, particularly reading and writing. Try as he might to get through the exam, it was his lack of academic skills that were holding him back. As Drew explained: “My mind just doesn’t work that way.”

It is distressing to watch people like Drew have their dreams challenged at such a young age. But as Chang (2000) writes:

Passion gives us the energy to apply ourselves and work to develop our skills, but it cannot create something from nothing. Every self-help book includes stories of people who have overcome hardships or limitations. But the bottom line is that they could accomplish no more than their physical, intellectual, and emotional capabilities would allow. (p. 22)

Drew had learning challenges that made it difficult to pass the entrance exam for the police academy. Options to have his learning difficulties accommodated and further academic upgrading to improve his confidence were discussed. In addition, the possibility that he might not be able to pursue a career as a police officer was explored. Interestingly, it was he that acknowledged through some gentle probing that his dream of being a police officer might not be fulfilled. Once this was conceded, he was ready to consider other career options. What he found appealing about a career in the police force became the starting point for a discussion about what other career options might fit that did not require the academic skills with which he struggled.

Young people who have occupational goals for which they either do not have the interest or the aptitude often spend a great deal of time working towards a career pathway that has a low probability of success (Reynolds et al., 2006). Without assistance to look first at the realities of becoming a police officer, Drew may have been delayed in finding a more suitable career path

In contrast to Drew, some young people have difficulty dreaming. They do not dare to dream because they lack the confidence or access to financial resources required to gain tertiary education credentials. As Maggie noted: “I had no dreams, no goals, and no plans when I graduated from secondary school.” Her secondary school years were difficult. She was bullied both emotionally and physically and did poorly academically. She had no friends and was “socially handicapped” when she graduated. Her experience in school left her with so little confidence that she believed herself to be incapable of doing anything beyond working on a road crew or an assembly line. Similarly, Ball et al. (1999) found that a significant number of the participants in their study had no “imagined future” at all. Their futures were short term or made up of “wait and see, of what turns up, of vague maybes or unlikely flights of fancy” (p. 212). Ball et al. state that this group of young people was heavily constrained by economic circumstances or by negative identities as learners. Often their immediate futures were constructed more by what they did not want than what they did want.

In other cases, powerful messages from others make it difficult for young people to engage in dreaming. Some participants were so busy meeting the demands of those around them to go directly to tertiary education and to have a long-term career plan that there was little space to develop their own visions of the future. It was like that for Antoine who engaged in drifting because his father’s expectations made it hard to engage in the exploration that might have facilitated the formulation of a dream. Some participants had dreams but were discouraged from following them because they were not deemed by others to be secure or prestigious enough. Few participants had the resistance skills immediately after secondary school to resist pressure from their parents to set aside dreams that were not considered acceptable.

Case example: Sam had been sent to counselling by his course instructor because he wanted to drop out of an electrical engineering technology programme at a local polytechnic after his first semester. Although the programme was known to be a particularly difficult one, Sam was doing fine academically. Sam's problem was not his ability but his lack of interest in the subject matter that was heavily weighted towards maths and physics. When advising him on a career path, Sam's parents had focussed solely on the realities of the labour market and ignored Sam's dream of making fine furniture.

One of the difficulties of balancing dreaming and reality is to decide whose reality is being described. Sam's parents' reality was quite different than Sam's. They had struggled their entire married life to make ends meet and to ensure that Sam was able to obtain the education necessary for financial security. Sam's dreams were not considered. In the minds of Sam's parents, furniture building was not going to give Sam the financial security they desired for him. Sam, for his part, had not looked into the day-to-day realities of being a furniture builder nor his job prospects with that training. Like many young people, he was uninformed about the economic returns of his occupational choice (Grubb, 1997).

Counselling focussed on helping Sam and his family find a common middle ground between Sam doing something he wanted while still being able to make a living. Sam was asked to talk to furniture builders about their work and his future job prospects. When he did so, it became apparent that he would likely experience economic hardship as a furniture builder, at least in the short-term. His parents were similarly encouraged to help Sam look at how he could make a living as a craftsperson, and the potential financial and emotional cost of forcing Sam to take a tertiary programme that he did not want to take. Once his parents showed interest in helping Sam fulfil his dreams, Sam was willing to admit that the financial struggles associated with being a furniture builder concerned him. Sam and his family were now ready to work together to find a way of balancing Sam's dream of being a furniture builder with the reality of making a living.

While parents typically want their children to be happy, they also often want them to work in a field that is financially secure. This can lead to the mixed messages reported

by Torin who said that his parents told him to “follow your dreams as long as they lead to a stable secure job.” Counselling professionals are in an ideal position to hear in conversations with young people if there is any conflict between external expectations and personal preferences. Through the counselling process, professionals can help young people recognise and articulate what others’ expectations are of them and how those expectations are impacting upon their career decisions (Middleton & Loughhead, 1993). They can then help them explore whether or not their choices are really their own. For young people who are being pressured into making decisions that are not a good fit, professionals can be instrumental in helping youth determine if and how they will handle conflicts with those who are significant in their lives.

There is a fine distinction between encouraging young people to follow their dreams and helping them engage in the fraudulent belief that they can do anything (Pryor & Bright, 2007). On the one hand, it is important that they are encouraged to dream. It is possible that with hard work, support, and some lucky breaks, their “crazy” dream might become a reality. On the other hand, it is vital that over time they investigate the realities of their dreams and make adjustments as needed. In order to encourage the balancing of dreams and reality, professionals can encourage young people to seek out what Ball and Vincent (1998) refer to as “hot knowledge” through first-hand experience or talking to people that are known to them who are familiar with education or career options that are of interest to them.

Principle # 3 – Do What You Love Somewhere in Your Life

Popular press books with titles such as *True Work: Doing What You Love and Loving What You Do* (Tom & Tom, 1998) and *Work with Passion: How to Do What You Love for a Living* (Anderson, 2004) tell young people that they should be heavily invested in their work. These books suggest that those who settle for employment that is not entirely satisfying have failed to realise their potential. The focus, however, on finding paid work that one is passionate about may ignore a host of internal and external factors identified by Patton and McMahon (1999) that can impinge on career decisions. The assumption that young people should be passionate about their paid employment also promotes one of the career myths that Lewis and Gilhousen (1981) cautioned against: that work should satisfy

all of our needs. While there is nothing wrong with a young person aspiring to be paid for work they love, they will experience more flexible career paths if they are willing to consider how their passions can be achieved in other parts of their life besides paid employment.

Case example: Jacques, a 28-year-old professional photographer, thought he could make it on his own when his job at the local newspaper ended. Budget cuts and new owners who liked to hire freelancers meant he was going to have to find work elsewhere if he still wanted to make a living with his camera. At first he actually welcomed the opportunity for a change. He had always dreamed of becoming a landscape photographer. Extensive experience running to crime scenes had honed his skills to shoot day and night in any weather. He had dabbled in this area of interest for sometime without much financial success. With his regular pay cheque gone, Jacques tried to support himself as a landscape photographer exclusively. He soon failed. In counselling, Jacques developed a simple plan. He would devote one week each month to his landscape work and take on more mundane assignments like wedding photography in order to pay the bills.

Solutions like Jacques' are easier to find when, paradoxically, individuals realise that they do not have to earn a wage or a salary to do what they love to do. It is easy to think in our work-obsessed culture that everyone views work as one of, if not the, most important roles that they play (Schor, 2003). Super's (1980, 1990) notion of role salience challenges this one-dimensional point of view. Super contends that people value multiple roles differently, such as studying, working, community service, and family life. While each role may bring us satisfaction, what is clear is that work is not always the most important part of our lives. At different ages, across different cultures, people have valued work differently (Wrzesniewski et al., 1997). Today's youth are showing more concern about life-work balance than their parents do (Dwyer et al, 2005). As Duxbury (2006) explains:

They saw their parents downsized, they saw their parents go on stress leave, they saw their parents take Prozac and they saw their parents get divorced. And they say: “I will never make that mistake. I will never put my job ahead of my life.” (p.1)

Young people may very well be on the right track. A fixation on paid work overshadows consideration of the myriad of roles played by individuals (Hansen, 1997). The advice to do what you love somewhere in your life supports Peavy’s (2001) contention that career counselling should broaden its scope to encompass life planning. The encouragement to consider all of their life roles as possible vehicles to fulfil their passions gives young people more options. Jacques’ passion for landscape photography could manifest itself in paid employment or as a leisure activity. Knowing this gives him more flexibility to respond to changing circumstances. He wisely chose to pursue landscape photography more as a leisure activity from which he might eventually be able to make a living.

Principle # 4 – Find the Next Career Step Rather than a Destination

Despite the prevalence of the career myth, studies, including the present one, have found that most young people have short-term plans rather than long-term visions of their career pathways (Evans, 2007; Vaughan & Roberts, 2007). Most participants in this study ended up following career pathways that they had not planned to pursue when they left secondary school. Their plans evolved and transformed as they gained more experience and their circumstances changed. These findings are congruent with Bright et al.’s (2005) contention that career decision making is “the result of short-term decisions made as situations and opportunities arise in the environment and not the result of long-term rational planning” (p. 564).

The incremental style of career decision making utilised by young people is supported by chaos and complexity theory. Given that unpredictability and non-linear change will likely characterise their career pathways, it would seem efficacious for young people to focus on short-term rather than long-term career planning (Drodge, 2002; Pryor & Bright, 2007). Miller-Tiedeman (1988) encourages people, young and old, who are not

sure what they want to do to take a step and wait for more information to become available. That step may include trying out a university programme, taking up a new hobby, joining a club, travelling, getting a job, or volunteering. By taking a first step, young people learn new things about themselves and about the work that people do. After a young person takes one career step, they have new information that will inform the next (Bright et al., 2005; Bright & Pryor, 2008).

Case example: Andrew had no idea what he wanted to do when he graduated from secondary school. Because he did well in physics and maths, his teachers and parents encouraged him to go into engineering. Although he excelled in the programme, he did not enjoy his courses and decided to take a year off to travel and work at a ski resort. Through volunteering with a disabled skiers association at the resort, he realised that he liked working with people. This informed his decision to go back to university to study psychology. He really enjoyed his courses but was still unsure what he wanted to do when he graduated. An opportunity came up to work with the local police force for the summer patrolling the local parks. It was through this experience that he decided to pursue policing as a career. Through his work as a police officer he became interested in forensic science and eventually took a leave of absence from his work to return to university to get the required graduate level education in chemistry to advance his interest.

Andrew's story emphasises the important role that experience plays in helping a young person explore their identity and find suitable options (Arnett, 2000a, 2004; Vaughan & Roberts, 2007). Like many participants in the present study, his vocational preferences became apparent over time as he gained more experience. Andrew was not ready to make long range career decisions when he graduated from secondary school. Like most people his age, he needed time to drift (his year of travel) and explore (choosing career-related experiences). Paradoxically, each small decision was part of a process of making decisions that impacted greatly on his future career opportunities (Krieshok, 2001). Therein lay his challenge: choosing a starting place while leaving room to adapt his choices or change them all together if necessary (Savickas, 1997).

Emphasising that they are looking for their next career step rather than a final destination may do much to alleviate the anxiety that so many young people experience in relation to career planning (Krumboltz, 1992). Instead of being faced with the untenable and terrifying imperative of having to make a long-term career plan, they are presented with the more manageable requirement of choosing their next career-related endeavour.

A focus on short-term plans may also help to counter the mistaken view that many young people have that career counsellors can play the role of soothsayers (Galassi et al., 1992). While counsellors can do much to assist a young person to find a promising career step, they have no control over the host of internal and external factors that shape a young person's career pathway. Once young people make a career step, it is essential that they be active in seeking out information and new experiences to see if the short term commitments fit their emerging identities (Kreishok, 2001).

Ideally, the recommendation to find one's next career step works in conjunction with the principle discussed earlier in this chapter that advises young people to develop a set of criteria or a shopping list based on vocational identity to help them assess career options. Rather than selecting whatever happens to be available, young people are well-served by plans that reflect their interests, values, and talents (Shanahan et al., 2003). Those who have made choices for which they are well-suited are more likely to be motivated to engage in their studies and training and to gain a sense of satisfaction and competence from their endeavours (Carpenter, 2008).

Young people can be assisted with identifying their emerging vocational identities and connecting them to education and career options that could provide good starting places that can be adapted over time (Drodge, 2002). For example, through the use of quantitative and qualitative assessment, a career counsellor may have been able to assist Andrew with clarifying some of his emerging vocational identity. He had never particularly liked maths or science in secondary school but had enjoyed the coaching he had done as part of his community service. His interest in helping people would have come to light if qualitative or quantitative assessments were done while he was in university. Insight into his interest in helping people might have led him to pursue a helping profession sooner rather than later.

Principle # 5 – Approach Career Goals with Positive Uncertainty

The findings of this study indicated that there were both positive and negative consequences when participants utilised a navigating strategy by proclaiming long-term career goals. For some, the employment of this strategy resulted in them taking a direct route to a satisfying career. Others ended up in careers that they did not like. The previous chapter contended that the navigating strategy was best used in conjunction with open-systems thinking that encourages young people to approach their goals with positive uncertainty. Guided by positive uncertainty, young people are advised to pursue goals but to remain open to changing their minds on the basis of future experience (Gelatt, 1989). Chen (2006) and Dwyer et al. (2005) have also observed that an individual's goals may need to be adjusted when circumstances change. The notion of positive uncertainty helps young people to deal with what Strauber and Walther (2006) refer to as the “paradox of forward planning” in which “on the one hand, they are encouraged by all transitional institutions to plan their transitions and careers, while on the other hand, they constantly experience the need for contingency plans which in itself provides evidence for the decreased feasibility to plan transitions” (p. 244).

Krieshok (2001) offers an example of what it would look like if a young person were to approach their goal of completing a biology degree with positive uncertainty:

I have committed to biology as a major, because it seems like a reasonable match with where I am today, and where I could see myself in five years. But, in fact, I am likely to change a great deal in the next five years, and more importantly, I am likely to be exposed to a thousand different people and situations that could provide opportunities for planned happenstance. (p. 213)

The fact that goals often change is not a reason to abandon planning altogether. Plans are important because they are as Gelatt (1995) notes “a goal-driving mechanism” (p. 114). When a young person has career-related goals, they are motivated to work hard and the achievement that results from their efforts provides them with more opportunities. Moreover, the process of pursuing a particular goal allows individuals to collect information about themselves and the world that informs further action and helps build

momentum (Bright & Pryor, 2008). The key, however, is that they remain open to changing their plans as new information comes to light and circumstances change (Gelatt, 1991). Encouraging young people to expect that their goals will likely change is an ecological approach that fits well with a chaos theory perspective (Bloch, 2005; Drodge, 2002; Pryor & Bright, 2007). The advantage of this approach is that it allows young people to benefit from the motivation that goals provide without being constrained by them (Gelatt, 1995).

Case example: Gabriella decided to become a lawyer after she graduated from university with an undergraduate degree in English. While she was going through the application process for law school, she started a job working with high risk youth as a way of making money. Much to her surprise, she loved the challenge and emotional rewards of working with difficult young people. Her experience caused her to rethink her goals and to pursue social work rather than law.

Case example: Saleem came to counselling burdened with a sense of loss when he failed to be accepted into a veterinarian training programme for the third time. Despite his tenaciousness, his marks were never quite high enough to be accepted. Counselling focussed on helping Saleem face up to the psychologically difficult task of letting go of a goal that he had since he was 14 years old.

Gabriella's story exemplifies what Gelatt (1993) refers to as "flexpertise," the ability to work with ambiguity, remain open-minded, and most of all, to change one's mind and subsequent course of action. This ability to adjust to new circumstances and to change direction is becoming a standard survival strategy for young people as they make the school-to-work transition (Dwyer et al, 2005). Unfortunately, the messages that participants often received in this study to finish programmes they started or to stay in a job because it was secure often made it difficult for them to follow Percy's (2000) advice to self disrupt by changing course when it became clear that their career pathways no longer fit.

While Gabriella's flexibility was important, so too was the fact that she had a goal when she graduated from secondary school. Her goal to be a lawyer provided motivation for her to be diligent about her university studies because she was aware that it was

necessary to have good marks in order to be accepted to law school. As a result, Gabriella excelled in her studies and had the grades necessary to be accepted for post-graduate studies in social work. Without a goal, she may have been unmotivated in her undergraduate studies and not done well which would have limited her options to continue on to post-graduate studies.

Saleem's story illustrates the dangers of becoming too rigid about one's career goals. While there is no doubt that having a goal is motivating, disregarding the contingency of one's goals is risky (Pryor & Bright, 2007). However focussed and hard working young people are, it is often someone else who decides whether or not they are accepted into the training programme of their choosing or the entry level job with the brightest future. Saleem had what has been referred to elsewhere to as a "death grip" (Campbell & Ungar, 2004b) on becoming a veterinarian. He held on to his career plan even when there was abundant evidence that he was unlikely to succeed. Saleem may have benefitted from advice to approach his career goals with positive uncertainty.

An important aspect of operationalising positive uncertainty is to encourage young people to develop contingency plans. Pryor and Bright (2007) cite contingency planning as an important element of open-systems thinking. Encouraging young people to think about back-up plans as part of the planning process makes it more likely that they will be able to change their goals when necessary without losing momentum. Drawing parallels between the laws of physics and career planning, Amundson (2003b) explains: "Without any speed, inertia sets in and there is a tendency to stay at rest until there is some infusion of energy into the system" (p.79). At a dead stop in one's career development, it takes far more energy to gain forward momentum than attempting a change of direction while still in motion.

Pryor et al. (2008) have developed a useful exercise to help with contingency planning that they refer to as "Wotif." They recommend its use when a career decision maker is focussed solely on one vocational goal. The exercise asks them to identify the chance events that might occur as they pursue their goal and to consider how these events might change their plans. Besides developing alternative plans, the exercise gives career decision makers practice working with unpredictability as part of the career planning process.

Among the most important reasons to encourage young people to develop contingency plans is that it prepares them psychologically for a change of life course which in turn increases their career resilience. Career resilience shares many similarities with the more general notion of “resilience” in the literature which has focussed on the capacity of individuals to bounce back after exposure to adversity (see Ungar, 2004; Werner & Smith, 2001). Saleem may have had an easier time letting go of his goal to be a veterinarian if contingency planning had been part of his career planning process.

Principle # 6 – Expect to be Uncomfortable

If we accept that there is a great deal of uncertainty associated with career planning, we must also accept that it will be an uncomfortable process (Warren et al., 1998). While young people who are uncertain about career direction experience discomfort, those who have made career choices often feel anxious about whether they have made the right ones (Krumboltz, 1992). It is common for young people’s anxieties to be provoked by a fear of failing in their academic or professional careers and fear that their parents might be disappointed with their career choices (Vignoli et al., 2005). The following two case examples provide contrasting ways in which young people dealt with discomfort related to their career plans.

Case example: Charles came for career counselling as he was about to finish a Masters degree in biochemistry. He confessed that he had never enjoyed biochemistry, telling his counsellor: “I don’t know how I ever got this far into biochemistry. I never decided to be a biochemist.” His desire after secondary school had been to take some time off to travel and think about what he wanted to do. However, under pressure from friends and family he decided instead to take the path of least resistance and enrol at university. After finishing his undergraduate degree, he was anxious about what to do next. Doing his Masters was a way of alleviating his anxiety again. In a bid to outrun discomfort, Charles invested enormous time and money in gaining entry into a profession he really did not want to practice.

Case example: Robert attributed his success as a web designer in large part to his having been able to keep his anxiety in check when life looked less than certain. Immediately after secondary school, Robert did as was expected and attended university. Unsure what to study, he took a sampling of courses in the humanities and social sciences. But by the end of first year, he was no closer to figuring out what interested him. He decided to take a year off to travel, much to his parents' dismay. They worried that he would never return to university. Robert said that their anxiety was a "chain" around his leg, holding him in place. Although he had not initially been anxious about taking a year off school, as September approached and he knew he would not be attending classes, he could feel the weight of his decision. A variety of chance circumstances resulted in him rooming with a well-established web designer in Berlin. He learned enough during that time to start his own small company. He never went back to university, but instead enrolled in a technical programme in web design. The money he makes now is more than enough for him to support himself.

In a bid to hold discomfort at bay, Charles made an initial choice and then persisted on a career pathway without continuing to check whether it was something that he wanted to do. As Krumboltz (1993) points out, high levels of anxiety like that experienced by Charles can lead to paralysis and ill-considered career decisions. Although Robert also experienced uneasiness about his career pathway, his response was to experiment with options in order to gain more clarity about what he wanted to do. Rather than seeking comfort by making a choice, he was able to continue being uncertain while he looked into options despite the criticism that he received from others. Efficacious career planning sometimes requires young people to be able to deal with the discomfort of making unpopular career decisions (Sher, 1979). Robert's ability to resist the expectations of others that were in conflict with his own wishes was exhibited by several participants in the present study. While they were able to resist the expectations of others, participants typically found it uncomfortable to defy the wishes of their parents. As Dylan put it, when he chose to navigate toward hair styling rather than public administration (which is what

his parents wanted him to do): “it was the scariest thing ever to go against my parents’ wishes.”

The emotional component of career decision making is often overlooked (Kidd, 1998). The principle "expect to be uncomfortable" points to the need to address the anxiety that young people experience and the impact that it has on their career decision making (Emmerling & Cherniss, 2003). A counsellor working with Charles may have been able to help him see that his decision to continue on to do post-graduate work was motivated primarily by a desire to diminish his anxiety rather than an interest in biochemistry. It can be helpful for young people to understand that moderate amounts of career anxiety can provide motivation to engage in exploratory activities (Blustein & Phillips, 1988; Vagnoli et al., 2005). Fritz (2003) uses the term “structural tension” to refer to the stress that is created when there is discord between the reality one is living and what one wants life to look like. When a young person engages in education and career planning, they typically develop a picture of what they want that is different from what they have now. The wider the gap, the more tension there is. Fritz maintains that it is the discomfort caused by this tension that provides young people with the motivation to move towards their preferred futures.

Conclusion

This chapter has identified six career design principles developed out of the present study that provide young people with guidelines for flexible career planning that take a chaos-oriented approach to career planning. They replace the career myth which reflects a modernist view of lived experience that is predictable and linear. The six principles encourage a more ecological and indeterminate view of the career planning process.

The career design principles decentre the trait and factor approach to career decision making, and position career planning as an exercise that reflects the concepts that are a part of a chaos and complexity orientation to career development. They provide minimum specifications (Plsek & Wilson, 2001) that are helpful guidelines for young people coping with complex environments as they transition from school to work. While the principles do not change the need for young people to increase self-awareness, increase occupational knowledge, set goals, and develop and execute action plans, the expected outcomes of these

actions are viewed quite differently through the lens of the career design principles. Trait and factor approaches advise young people to engage in these actions with the goal of finding the one best career. In contrast, the career design principles encourage self-awareness and occupational knowledge in order to identify promising career steps. The trait and factor approach posits goals as ends in themselves. Conversely, the career design principles view goals as being important because they provide motivation and a sense of direction. Perhaps most importantly, the career design principles depathologise the need for young people to delay career decisions in order to seek out experiences that allow them to engage in identity exploration or to change their pathways based on new information and shifting circumstances. Creating space in the career counselling discourse for incremental career planning and indeterminacy may help address the anxiety often experienced during the school-to-work transition. Diminishing their anxiety will in turn make it easier for young adults to participate in activities that provide them with the opportunities to engage in identity exploration and to respond to changing circumstances.

The next chapter concludes the thesis. It considers the wider policy and practice implications of the study's findings, recommends areas for further research and reflects on the research process.

Chapter Nine

Conclusion

Introduction

The aim of this research was to understand more about the way young people in Canada make career decisions after graduating from secondary school. The motivation for this study grew from my observations as a career counsellor that there was a distance between the way many young people, parents, educators, and career professionals thought career decision making was supposed to happen and the way it typically occurred.

Specifically, the study sought:

- To understand how young people in Canada who successfully complete secondary school construct their career pathways;
- To examine how young people's resources (individual, family, social and environmental) and the messages they receive influence their career pathways;
- To consider the implications of these findings for the ways that parents, career advisors, and policy makers can assist young people in making positive career-related transitions after graduating from secondary school.

The chapter is divided into three sections. The first section begins by drawing together the key findings of the study. Discussion then moves to a consideration of the implications that these findings have for advisors and policy makers. The final section of this chapter reflects on the research process, limitations of the study, and makes suggestions about directions in which future research could proceed.

Key Findings

The following section outlines key findings that have emerged from this study.

Contingent Nature of Finding a Career-related Place

The majority of participants in this study either did not know what they wanted to do when they graduated from secondary school or subsequently changed their minds. Whatever plans they had when they graduated from secondary school changed over time as a range of factors impacted upon their goals. Even participants who were well informed and focussed about their future when they graduated from secondary school typically experienced unpredictable events and other internal and external influences that changed, or at least modified, the pathways taken. By the time they were in their late twenties, the majority of participants had found a career-related place with which they were at least somewhat satisfied. However, a sizeable minority were not able to follow their chosen career path or were still unclear about what they wanted to do.

These findings are consistent with developmental and chaos-oriented approaches to career development. From the perspective of these approaches, choosing a career pathway is akin to matching two moving targets, one the evolving identity of the young person and the other a world that is subject to the unpredictability and non-linear change characteristic of all complex systems. This is particularly true in post-industrial societies where few stable ready-made identities or preconceived career pathways are available (Peavy, 1993). Instead of taking on a predetermined identity, young people are challenged to engage in a process of self-discovery as a way of constructing a unique identity (Arnett, 2004; Dwyer et al., 2005, Vaughan & Roberts, 2007). The imperative to construct their own identities merged with a host of factors that impacted on participants' career pathways. These factors included: knowing what they want to do, messages about what they should do, resistance skills, tolerance for ambiguity, and the support and opportunities available to them.

While many participants began tertiary education having made clear career choices, most shifted from long-term planning to incremental decision making that in turn led them to produce an idiosyncratic career pathway consisting of a unique combination of training, study, and employment (Vaughan & Roberts, 2007). Few of them followed career pathways that they would have predicted at the time of secondary school graduation.

While identity development occurs throughout the lifespan, the early adulthood years are a particularly rich time for such development (McAdams, 1993). For many participants, the years immediately following secondary school provided an opportunity to

engage in identity exploration (Arnett, 2000a; Dwyer et al., 2005; Vaughan et al., 2006). Their identity quest occurred through a process of experimentation with tertiary programmes and different types of work as they tried to ascertain what constituted satisfying work. As participants tried out different types of work, they began to obtain a better sense of who they were and what type of career they might find satisfying and what options were available to them.

Findings from this study suggest that the expectation that young people's career pathways will be linear and predictable after secondary school is not realistic. The decade after secondary school is a time of growth and change for most young people. Whatever plans they have when they graduate from secondary school will likely change as they engage in the process of finding a career-related place and encounter unanticipated factors that will shape their pathways as they move forward. While some young people may follow what appears to be a linear path from secondary school to satisfying employment, this is the exception rather than the rule.

The central role that experience plays in assisting a young person to construct an identity and produce a career speaks to the importance of experience-based approaches to career development. Like Ibarra (2003), the findings of this study suggest that interventions based on helping young people broaden their experiences are more effective than those that focus solely on assisting them to make plans.

Explanatory Power of Chaos and Complexity Theory

Like their counterparts in other western countries (Arnett, 2004; Dwyer et al., 2005), participants' career pathways shifted as they encountered a host of internal and external factors. While the existence of such factors has been explicated in the literature (Brown & Lent, 1996; Lent, Brown, & Hackett, 2000; Patton & McMahon, 1999, 2006), it does not appear to have changed the expectations that surround the school-to-work transition nor the methods commonly used to help young people with career planning.

The findings of the present study represent a novel application of Pryor and Bright's (2007) work by making a case for expanding the role of chaos and complexity theory in relation to helping young people with the school-to-work transition while at the same time de-emphasising the use of trait and factor approaches. Pryor and Bright (2003a) have

proposed a chaos theory of careers that maintains that the numerous influences on an individual's career path mean that it is subject to the unpredictability and non-linear change characteristic of all complex systems. One of the most valuable contributions made by chaos and complexity theory is its ability to reframe the circuitous pathways taken by participants. Instead of viewing such pathways as being disordered, chaos and complexity theory perceives them to be normal because unpredictability and change are a characteristic of modern life. Conversely, the linear pathways that are lionised by so many are seen as atypical rather than something to which young people should aspire. While stressing the vagaries of an individual's career plan, chaos and complexity theory also emphasises the hidden order that is provided by an individuals' vocational personality that includes their interests and values (Riverin-Simard, 1997, 1998, 2000).

The acceptance of a chaos and complexity interpretation of the school-to-work transition requires career counsellors to de-emphasise the selection of specific occupations in their work with young people. Instead, working with uncertainty and change become central to the career planning process (Miller, 1995). Career decision makers are encouraged to engage in planning while at the same time remaining open to change based on new information and experiences (Gelatt, 1989, 1991; Gelatt & Gelatt, 2003). Consistent with the recommendations of chaos and complexity theorists (Brown & Eisenhard, 1998; Plsek & Wilson, 2001) and the data from the current study, minimum specifications in the form of six career design principles have been proposed in Chapter Eight that can assist young people engage in the process of finding a career-related place in a way that is proactive while at the same time accepting that career pathways are uncertain. The career design principles that were identified, and which are useful to both career decision makers and counsellors, are:

1. *Develop a set of criteria to guide decision making:* Interests and values can act as reference points for career decision making.
2. *Balance dreaming and reality:* Investigate both dreams and the realities of putting dreams into action.
3. *Do what you love somewhere in your life:* Making a living and living one's passion are not necessarily the same thing.

4. *Find the next career step rather than a destination*: Focus on next steps rather than long-term plans.
5. *Approach career goals with positive uncertainty*: Career planning is helpful, but rigid goals can place artificial limits on the options available to an individual.
6. *Expect to be uncomfortable*: Become comfortable with being uncomfortable.

Strategies for Finding a Career-related Place

Chapter Five identified a typology of strategies that participants used to find a career-related place. The strategies were categorised as either search or engagement strategies. The search strategies related to the way that participants went about finding a career-related place. The engagement strategies describe the cognitions that participants had about the career-related place they had found. This typology emerged from the data and serves as a heuristic device rather than a set of categories in which to pigeonhole young people.

Participants appeared to use three search strategies to find a career-related place after secondary school:

Navigating. Participants who employed a navigating strategy knew what they wanted to do and were engaged in education and/or work activities necessary to achieve their goal. Though they could clearly articulate a desired destination for their career search, they may or may not have known much about the specifics of what they had chosen to do.

Exploring. Those who utilised an exploring strategy could not say what they wanted to do specifically, but were engaged in a process of experimentation as a way to learn more about themselves and their options. They were purposeful in their searches for information about career opportunities, they speculated about areas of interest, and they sought experiences whereby they could test the waters to determine the fit of particular career options. Explorers, though uncertain about their goals, actively tried to understand where they might put their talents and interests to best use.

Drifting. Participants who used a drifting strategy did not know what they wanted to do, were laissez-faire about making choices, or faced numerous barriers to career fulfilment. Being unable or unwilling to proactively seek a career, they were apt to “go with the flow.” Over time some became stuck. There was a sense of aimlessness and passivity in the stories some drifters told of their tertiary education and work histories.

The following engagement strategies encompass participants’ cognitions about the career-related place they found:

Settling. Those who employed a settling strategy found a career-related place that they did not particularly like but, for a variety of reasons (e.g., income, sense of responsibility to family, consideration of partner’s situation), they planned to stay. A decade after graduating, some of the participants were settling, having attached to an occupation or lifestyle that fulfilled their need for a place, but which they described as only being moderately satisfying. The source of their dissatisfaction related to the work itself, poor pay, or lack of potential for advancement.

Committing. Participants who utilised a committing strategy had found a career-related place that was satisfying for them. They were generally happy with what they were doing and had no plans to change.

Participants did not choose a strategy so much as one emerged at different points from a convergence of a variety of factors including: knowing what they wanted to do, messages about what they should do, resistance skills, tolerance for ambiguity, and the support and opportunities available to them. These factors interacted in unique ways to generate a strategy. For example, Dylan knew at the time of secondary school graduation that he wanted to be a hair stylist. However, his parents were adamant that he attend university and pursue a career in public administration. He succumbed to his parents’ expectations because at the time he did not have the resistance skills to follow his desired career path. As a result, he drifted into a business programme that was of little interest to him. With support from his sister and aunt, he developed the resistance skills over a period

of four years that he needed to stand up to his parents' demands and began navigating toward his chosen occupation as a hair stylist.

As was indicated by Dylan's experience, the strategies that participants utilised and the outcomes they reached were fluid in nature. Most used more than one strategy to find a career-related place. Some participants discovered an exciting possibility while they were using a drifting strategy and then suddenly began navigating. Others who navigated began exploring options when student debt, low marks, or disillusionment about their chosen path made it impossible or unattractive to follow their original plans. Still others settled or even committed to a place only to start exploring or navigating to another. The strategies were contextually sensitive with no single strategy effective for all young people all of the time.

Both negative and positive consequences were identified for all five strategies. A few participants who navigated immediately after secondary school found direct routes to satisfying careers. However, others who navigated immediately after secondary school were in danger of ending up in careers that they did not want to pursue. Messages that changing one's mind was not a good thing to do sometimes made it difficult for those who navigated to change course once they realised that the career pathway they had chosen was not suitable for them. A further negative consequence of navigating was that participants did not look for, or receive, help in relation to their career pathway because they appeared to have found a suitable career. Navigating was most effectively utilised when a young person was knowledgeable about the option they were choosing and had at least some awareness of how it aligned with their interests and abilities.

Exploring was a strategy that brought many benefits for participants who utilised it. This included avoiding paths that did not fit and building confidence in their choices. The primary drawback was that those who used it were often criticised for doing so, particularly if it occurred outside the confines of tertiary education. Exploring was a strategy that lent itself well to the identity work which most secondary school graduates need to engage in order to find work that is satisfying to them. It gave them an opportunity to learn more about themselves and the options available to them in an experiential manner.

For some participants, the use of a drifting strategy provided an opportunity to learn more about themselves and to be exposed unexpectedly to an interest area. However, participants whose circumstances led to the use of a drifting strategy for extended periods

of time seemed to obtain little in the way of credentials or marketable skills years after they had graduated from secondary school. While the use of a drifting strategy was efficacious for some participants, its haphazard nature could lead young people to become confused and dispirited (Carpenter, 2008; Schwartz et al., 2005). Settling worked well when young people recognised their need for security or their desire to focus on other aspects of their lives. These young people were more satisfied with their work than those who settled into a job because they had not found work that was fulfilling.

Participants who used a committing strategy found work that was satisfying and that aligned with their growing sense of self. The principle disadvantage to this strategy was the role conflict that it sometimes caused when participants entered into long term relationships or became parents. Those who liked their work were often in jobs that required long hours. This tended to work well until they took on roles as partners or parents that required them to assume additional responsibilities that sometimes conflicted with their paid employment.

The process of identity exploration that occurs in the emerging adult years suggests that many young people can benefit from adopting an exploring strategy in the years immediately following secondary school. This is not to say that identity exploration does not occur when young people are utilising other strategies. A young person is engaging in identity exploration anytime they are trying out something new (Arnett, 2004). Hence, a young person who is navigating toward a career that they know little about is, in essence, engaging in identity exploration. So too is a young person who is employing a drifting strategy. While it is a haphazard and passive approach, drifting is another way that young people could have new experiences. However, the utilisation of an exploring strategy is a more proactive and transparent form of identity exploration than that of navigating or drifting.

Besides facilitating identity exploration, the employment of an exploring strategy promotes the open-systems thinking that is recommended by chaos-oriented approaches to career counselling because it normalises unpredictability and emphasises that young people are not in complete control of their career pathways (Pryor & Bright, 2007). The utilisation of an exploring strategy allows young people to be proactive about trying activities that are of interest to them without demanding that they make career choices that they are not ready to make.

Messages about the School-to-work Transition

While the exploring strategy is well suited to the identity work that many young people need to do, participants heard powerful messages that limited both the range of the career pathways they were able to explore and the time available to engage in experimentation. Most believed that, given their success in graduating from secondary school, they should enrol in tertiary education immediately. Some participants indicated that they had no desire to attend a tertiary institution at that time but felt compelled to do so by others. Many received the message that some careers were better than others. For those who heard such messages, a good career typically equated with one that was well paid, stable, and secure. Participants whose parents were professionals were more likely to report that their parents wanted them to pursue a high status job than those whose parents were not. Most participants did not have the resistance skills at the time they graduated from secondary school to confront the expectations of others, even when those demands were in conflict with what they wanted to do. As a result, most did what their parents wanted them to do after secondary school. Participants who had either not done well in secondary school or whose parents were not professionals typically did not have the same level of expectations placed on them. Their parents tended to accept their decisions when they decided not to attend tertiary education immediately after secondary school. They were also more likely to be supported in choosing careers that were not of high status.

It was clear that many participants were faced with unrealistic expectations about how their career pathways would unfold, namely that they would make a linear transition from secondary school to tertiary education and then into the workforce. This expectation was manifested in messages that they should have a plan and that changing their mind was counterproductive. These findings are reflective of what has been referred to in this thesis as the career myth which relates to the belief that young people should follow a linear, predictable route from secondary school to tertiary training, and then on to a permanent, full-time job.

Collectively, the messages that participants received about the school-to-work transition created problems for many. The pressure to attend tertiary studies immediately after secondary school meant that some participants did so before they were ready. This often translated into a lack of motivation that in turn led to dropping out or receiving poor

grades that later limited their options to go on to a professional programme or into post-graduate studies. The message that some occupations were better than others meant that some participants were not able to explore or navigate toward career options that were in line with their vocational personality. The career myth discourse created unrealistic expectations about the linearity of career pathways, which in turn caused undue anxiety. It would seem likely that behaviours exhibited by some young adults—such as poorly-considered career choices and procrastination about making career-related decisions—pertain to the anxiety generated by the career myth discourse. Some participants reacted to the pressure to have a plan by choosing whatever career options were closest at hand. Others were so concerned about making the wrong decision that they resisted making even short-term career-related plans.

The discourse of the career myth may at least partially explain why the navigating strategy was overutilised by many participants and the exploring strategy underutilised. The pressure to have a plan and to make choices that fulfilled the expectations of significant others pushed some participants into navigating toward pathways that were virtually unknown to them. The career myth also appeared to lead to the underutilisation by participants of an exploring strategy in the years immediately after secondary school. It was often difficult for participants to employ an exploring strategy because of the demands to start tertiary studies directly after secondary school and to have fixed plans.

Participants who wanted to employ an exploring strategy after secondary school graduation faced not only critical messages but also a dearth of formal opportunities to engage in exploration beyond employing it by trying tertiary courses that were of interest to them.

Inadequate Information and Guidance

The findings of this study suggest that most participants faced a school-to-work transition that was both complicated and uncertain. However, the majority of participants in this study either did not receive help with education and occupational choices or found the assistance they received to be inadequate. Unfortunately, this mirrors the experience of young people in Australia (Dwyer & Wyn, 2001), Britain (Ball et al., 1999; Dykes et al., 2005) and Canada (Pillay, 2004). As with young people elsewhere, participants indicated

that it would have been beneficial to have received individualised assistance to increase their self-awareness and to identify education and occupation options that may have corresponded with their evolving identities (CCDF, 2003).

There appear to be a host of factors that contribute both to the lack of guidance and the dissatisfaction that young people have with the services that are provided. One of the chief factors related to a dearth of career guidance is that such services are limited. In many Canadian secondary schools, guidance counsellors are viewed by students, parents, and school administrators as the primary provider of career guidance services. However, this is problematic as the ratio of secondary school students to guidance counsellors is typically high (Bell & Bezanson, 2006). Further exacerbating this situation is the fact that the dominant modality used by guidance counsellors is that of one-to-one counselling. As a result, in most Canadian secondary schools, guidance counsellors provide a small number of students with career guidance while seeing the majority infrequently or not at all (Bezanson, 2005). This pattern appears also to be the case at most tertiary institutions.

As with their contemporaries in other parts of Canada (Team Canada, 2000), most participants in this study did not access career guidance services while they were attending tertiary institutions. In general, polytechnics and universities have even higher student to career counsellor ratios than secondary schools (Watts & Sultana, 2004). While guidance services are limited for young people enrolled in educational institutions, they are almost non-existent for those who are employed or not in school (Bell & Bezanson, 2006). This means that most young Canadians who find themselves in unsatisfying jobs are not able to obtain professional help with career planning

While there are significant weaknesses with guidance services and career education programmes, young people's expectations may also play a role in their dissatisfaction with the services that they received. Guided by the career myth discourse, they may believe that career guidance services and programmes can provide them with definitive answers to their questions about which careers they should pursue (Dyke et al., 2005). Career practitioners reinforce this belief when they administer quantitative assessment tools that quickly match a young person with a career (Krieshok, 2001).

While many participants cited non-professionals such as family members, friends, and employers as beneficial sources of information, advice, and encouragement, few

received explicit guidance from these sources. It would appear that parents in particular are an underutilised source of guidance for young people that could be tapped in facilitating positive school-to-work transitions. Young people are often more comfortable getting help with career planning from their parents than from professionals (Witko et al., 2005). While counsellors have the advantage of training and experience, parents generally know their children well and have strong bonds with them (Palmer & Cochran, 1988). A number of studies have indicated that parents can help foster the career development of their children when they are assisted to do so (Amundson & Penner, 1998; Kush & Cochran, 1993; Palmer & Cochran, 1988).

Need for a Shift in Emphasis

Collectively, the findings of the present study question the wisdom of encouraging young people to declare long-term career goals. Developmental imperatives coupled with a complex environment where non-linear change is the norm make it difficult for young people to have assurance that their career pathways will unfold in a predetermined way. However, the discourse of the career myth means that many young people, and those who support them, continue to believe that it is both possible and desirable to follow a predetermined linear career path in the immediate years after secondary school graduation. This discourse disadvantages young people as they undertake the arduous task of constructing an identity and producing a career that Vaughan and Roberts (2007) contend is something that 21st century realities require. In Canada, like most other western countries, young people face a labour market that is increasingly uncertain with more temporary jobs, lower-quality jobs, fewer benefits, and more instability in employment (Clark, 2007).

Instead of being supported to engage in exploring different career-related options, most young adults are criticised despite the reality that an exploring strategy is best suited to both identity development and to the advancement of open-systems thinking that is advocated by chaos theorists in the career development field. Although long-term career plans will more than likely change in response to young people's evolving identities and to external circumstances, the career myth encourages them to navigate toward specific career destinations. Moreover, the career myth encourages closed-systems thinking that assumes that unexpected events will not happen (Pryor & Bright, 2007). When their career pathways

shift, as they often do, young people who engage in closed system thinking may experience a loss of confidence and a sense of disorientation (Pryor & Bright, 2007).

The increasing emphasis on career management skills shows that there is more attention being paid to the developmental aspects of careers. What is not so evident is the adoption of chaos-oriented approaches to career development. While the concepts of positive uncertainty and planned happenstance are often cited in the career development literature, Pryor & Bright's (2003a, 2003b, 2007, 2008) work on a chaos theory of careers is not well referenced. It is interesting to speculate on what it would mean for young people if chaos and complexity theory was widely applied to thinking about the school-to-work transition. Perhaps most importantly, the career myth would be discredited if chaos and complexity theory was embraced in relation to the school-to-work transition. Non-linear career pathways would be seen as the norm rather than aberrations. Those who followed lockstep career pathways would be viewed as curiosities rather than a standard to which others had to strive. The applications of chaos and complexity theory would also lead to an emphasis being placed on helping young people find order in relation to their career pathways through an understanding of their strange attractor patterns. This stands in sharp contrast to trait and factor approaches to career counselling that attempt to match young people with specific careers. A young person's career-related strange attractor can be discerned by looking for the patterns and themes related to their interests, values, and skills (Pryor & Bright, 2007). Chaos and complexity theory contends that it is these patterns and themes that will bring order over time. If a chaos and complexity theory perspective were applied to the school-to-work transition, young people would be encouraged to use these patterns and themes as a guide to making career-related decisions rather than choosing fixed career pathways.

Implications of Findings

This section addresses ways that the findings of this study can assist career advisors who work with young adults. Additionally, contributions which the findings can make to policy development are examined. Given that cultural practices, career development programmes, and related policies vary widely across populations and different provinces and countries, the suggestions put forth here should be considered for their appropriateness

on an individual basis. At the same time, it should be noted that there are excellent career development programmes and services in some secondary schools, tertiary institutions, and community-based services where young people are given a great deal of support as they transition from school-to-work. Therefore, some of the following suggestions may already be in practice in some locations.

Career Advisors

The findings of this study can be useful to career counsellors, academic advisors,³¹ educators, mental health professionals and parents who assist young people with career planning (all such individuals will hereinafter be referred to as advisors). Specifically, findings from this thesis argue that advisors would serve young adults best by helping them work with uncertainty, critically examining the messages that they receive about what is normative, and encouraging them to utilise an exploring strategy in the years immediately after secondary school. While many of the techniques discussed in the following section have been advocated as part of formal career counselling, they can also be used informally by advisors who do not have a career counselling background.

Help young people work with uncertainty. Clearly, non-linear change and unpredictability characterised the career pathways of many participants in the decade after secondary school graduation. Young people need tools not only to make informed choices, but also the means to help them weather the uncertainty and changes of heart that will likely characterise their pathway. When advising students, the results of this study emphasise the importance of normalising unpredictability and change in the school-to-work transition and providing young people with tools to work effectively with this reality. As Miller (1995) has maintained, career counselling should help clients recognise that uncertainty is part of the career planning process. According to Pryor and Bright (2007), closed-systems thinking which does not accept this reality can lead career decision makers to experience a sense of being confused, frustrated, depressed and overwhelmed when

³¹ Most Canadian universities have academic advisors that assist students in choosing their courses. In some universities, faculty advises students while others hire professional advisors.

unwanted change occurs. Other problems that can arise are a loss of confidence and a decline in willingness to take risks.

One way of normalising unpredictability is to promote open-systems thinking which acknowledges the existence of a range of factors that can change a young person's career pathway (Bright & Pryor, 2007). An effective method for promoting such thinking is for advisors to suggest that young people examine the role of chance events and non-linearity both in their lives and the lives of others (Drodge, 2002). Pryor and Bright (2007) have designed a series of exercises that can assist young people with this. For example, the "Reality Checking Checklist" asks questions that have young people consider the degree to which non-linear change and unpredictability have characterised their own lives.

Hearing the stories of how other people's careers have been impacted upon by chance events and characterised by twists and turns is another way of normalising non-linear career pathways. A good place for advisors to start in this regard would be by sharing their own career pathways or those of others who have had circuitous pathways. This may help to dispel young people's assumptions that older adults chose their careers carefully and followed linear pathways to their current career destinations. Young people may benefit particularly from being made aware of the indirect career pathways followed by those who are a few years older than themselves. This could be done informally or through videotaping the stories of young people. Davey et al. (2005) found that showing a videotape to university students of recent university graduates who had capitalised on chance events helped to increase their career decision making self-efficacy and career exploration activities.

In addition to understanding the prevalence of change, young people need tools that will assist them to plan while remaining open to change. While it is helpful for a young person to know that change and uncertainty is normal, it is a completely different matter for them to contend with this reality in a productive and positive way. An important role for advisors is to foster the development of dispositions that assist them to contend with change. According to Barnett (2004), the cultivation of qualities and dispositions that allow people to act purposively and judiciously in the face of uncertainty is critical. Specifically, he identifies resilience, humility, courage, and thoughtfulness as important traits in positively managing uncertainty. Proponents of career resilience have argued that career

decision makers of all ages need to develop the ability to manage ambiguity and to be able to change their minds and subsequent course of action when needed (Koonce, 1995; London, 1983).

However, as indicated in the present study, young people varied in their tolerance for ambiguity. Some participants were comfortable with ambiguity, while others became anxious when faced with uncertainty. In such cases, there is a need for advisors to work with young people to help reduce their anxiety so that they can make more considered decisions rather than hastily making career plans in order to alleviate their uneasiness.

Advisors may want to consider the use of journalling and mindfulness practices such as meditation to help young people work with the anxiety they may be experiencing around career decision making. Journalling can assist young people to recognise and label their emotional experiences and to identify their patterns of dealing with anxiety (Di Fabio & Palazzeschi, 2009; Emmerling & Cherniss, 2003). Mindfulness practices have been shown to be particularly efficacious at helping career decision makers cope with anxiety about the future which in turn helps them to be better able to tolerate ambiguity (Jacobs & Blustein, 2008). A common form of mindfulness practice entails having a young person sit quietly and focus their attention on their breath. As thoughts and feeling arise, they are asked to notice them but to let them go and return to attending to their breath. Over time, young people who engage in mindfulness practices may be able to learn to see anxious thoughts and feelings as finite and transitory which in turn may make them less apt to rush into poorly considered career decisions.

Another way that advisors can assist young people to work with uncertainty is to provide guidelines on how to engage in the process of finding a career-related place in a way that is proactive while at the same time accepting that career pathways are uncertain. Two approaches that serve as examples of this type of flexible planning include Mitchell et al.'s (1999) emphasis on chance events ("planned happenstance") and Gelatt's (1989, 1991) concept of flexible decision making ("positive uncertainty"). Advisors working from a planned happenstance perspective emphasise the important role that unexpected events have on young people's career pathways and assist them to combine planning with the ability to create, recognise, and take advantage of chance events. For example, advisors can assist young people to create desired unplanned events by asking them about chance events

that they would like to happen and have them reflect on what actions they could take to increase the likelihood of the event occurring (Krumboltz & Levin, 2004; Mitchell et al., 1999). The positive uncertainty approach counsels advisors to encourage young people to develop career-related goals while at the same time having them reflect on what might cause their plans to change over time. A further way to promote flexible planning is through the use of the six career design principles that were discussed in Chapter Eight. Advisors may find it useful to present these principles to young people as a way of framing the career planning process.

Assist young people to examine influences. In addition to highlighting the importance of assisting young people to work with uncertainty, the findings of this study indicate the need for advisors to consider the influence of significant others in young people's career decision making processes. Participants in the study repeatedly discussed ways that both familial and societal messages impacted on their decisions. This included both explicit and implied directives about going to tertiary education, appropriate and inappropriate choices, the need to have a plan, and the perils of changing their minds. Many participants said that they made choices to please others rather than doing what they wanted.

By understanding the impact of familial and societal messages on young people's career choices, advisors can be more effective. Advisors are in an ideal position to hear in a young person's conversations if there are conflicts between external expectations and personal preferences. They can help young people recognise and articulate what others expect and how those assumptions are impacting their career decisions. The career counselling literature provides a number of techniques for examining the messages that young people are receiving. Thorngren and Feit (2001) have developed a counselling technique that they refer to as a career-o-gram that can assist advisors to develop a pictorial representation with young people of the multiple influences that impact upon their career decisions. Questions are designed to determine the unique cultural, ethnic, and gender influences experienced by individuals. Some examples of such questions are: "Who has influenced your career decisions the most?" "What do significant others in your life think you should do?" "In what ways was your decision similar to that of other young people you

know?” and “What messages do you receive as a male/female about what you should do?” Another counselling technique that can be used to explore the influence of familial and societal messages is to ask young people what career options they have considered but not pursued (Brown & Lent, 1996). Discussions of discarded options can then be used to analyse the influences that led them to eliminate those options as possibilities.

Young people who are assisted in identifying the messages that are influencing their career decisions are in a better position to decide which messages are helpful and which need to be challenged. For young people who are being pressured into making decisions not of their choosing, advisors can be instrumental in helping them determine if and how they will handle conflicts with those who are significant in their lives.

Encourage the utilisation of an exploring strategy. This study shows that participants found it difficult to know for sure what sort of career pathway they would, could, or should follow. There were simply too many unpredictable variables influencing the avenues available to them for them to be certain. Given this, it would seem that the employment of an exploring strategy would be beneficial for many young people in the years immediately following secondary school. It is only through encountering a variety of experiences that young people can increase their confidence about what holds their interest, what they are capable of doing, and which career options have the potential for being personally fulfilling.

In order to use an exploring strategy, a young person needs to have at least some awareness of their interests, values, and skills. The more self-awareness they have, the more reference points they have for identifying promising first steps to take. An advisor can play a pivotal role in this translation process to the degree that they are familiar with a young person’s interests and values and are knowledgeable about educational and occupational options. Numerous qualitative and quantitative tools are available for advisors to use that can help young people to become more self-aware. Qualitative assessments are particularly valuable because they are grounded in young people’s experiences. For example, the Pattern Identification Exercise advocated by Amundson (2003a) asks young people to identify both negative and positive experiences in various domains of their lives including work, education, family, and leisure activities. After describing their experiences

in detail, they are asked to consider what this information says about their interests, values, personal style, and skills. As they query a range of experiences, patterns emerge that can be used as reference points for identifying education and career options that warrant further exploration and those which are best avoided.

Once patterns have been identified through qualitative means, qualified advisors are encouraged to use quantitative assessments (such as the Strong Interest Inventory [Strong et al., 1994]) that can reinforce patterns that have been identified through qualitative means or identify new ones. However, the findings of this study point to the need for advisors to be cautious about how they use quantitative career assessments. Several participants reported that a list of occupations generated by quantitative assessments was provided to them without any assistance being given to help them understand what the results signified. As a result, the list of occupations that the assessment generated had little meaning to them. Carpenter (2008) has pointed out that the results of career assessments are of little value if they do not promote self-discovery. Simply getting a list of occupations is not helpful unless a young person understands the ways in which the results fit their evolving identity. They need to know why particular jobs or activities are a good fit for them while others are not. Given this, it is recommended that advisors use the results of quantitative assessment tools as part of a broader counselling process that includes the use of qualitative tools. Once a young person has a sense of their interests, values, skills, and personal style, they have reference points for identifying tertiary education programmes and occupations that may be satisfying. At that point, advisors can assist them to brainstorm a range of education and career possibilities that may be congruent with their emerging identity.

After young people have a sense of the career options that are of interest to them, they need to find practical ways that they can explore these options further (Krieshok, 2001). Many participants in this study used tertiary education to explore their interests by taking courses that appealed to them. While this method has its merits, it can be an expensive, time-consuming, and demoralising way for young people to learn that they are incompatible with an education programme or occupation. This is particularly true in the case of occupationally-specific programmes, such as nursing or plumbing, where the ability to transfer credits earned to another training programme may be limited. Advisors can be effective in helping young people explore options outside of tertiary education programmes

by connecting them to career exposure programmes, events, and experiences in their communities.

Policy Makers

This section considers the implication of the findings of this study for policy makers. It addresses the question of what programmes, services, and structures need to be in place to support young people given the contingent nature of finding a career-related place and the need for most young people to engage in exploring in the years immediately following secondary school. Discussion focuses on the role of government and the instrumental role it has in providing strategic leadership in increasing the provision of career guidance services to young people. As Watts (2008) has observed, most career guidance services are funded directly or indirectly by government at a national, provincial, or local level. However, it is also emphasised that governments may want to consider career guidance policy in association with education and training providers, employers, unions, community agencies, advisors, and young people themselves. The suggestions for policy makers include the need for lifelong career guidance services, work experience programmes, articulation agreements between tertiary institutions, and parent training.

Increase provision of lifelong career guidance. The degree to which the career pathways of participants changed over time highlighted the need for policy makers to place the acquisition of career management skills by young people at the centre of career guidance programmes in schools (OECD, 2004b). The acquisition of such skills helps young people to develop the skills and dispositions needed to self-reflect, to continue assessing and learning about themselves, to find and analyse information about education and career options, and to develop flexible plans. It is recommended that career guidance programmes begin no later than grade seven in the Canadian school system³² because of the developmental nature of career management skills (Bell & Bezanson, 2006). Those who are developing career education curricula may want to follow Australia's example by using the Blueprint for Work/Life Design as a framework for integrating career management

³² Students are generally 11 or 12 years old when they enter grade seven in Canadian school systems. Grade seven is equivalent to year seven in the New Zealand school system.

competencies across the school curriculum (MCCEETYA, 2007). The Blueprint provides a developmental skills framework that identifies core career management competencies and associated performance indicators (Haché et al., 2000).

The findings of this study suggest that policy makers may also want to consider ways to make career guidance services widely available to all young people. Several participants said that they had chosen a career path when they graduated either from secondary school or a tertiary institution and did not access the career guidance services offered by their institution. When their plans did not materialise after graduation, they were no longer able to access career guidance services or at least were not aware of how to do so. Moreover, the present study shows that young people's career pathways could change quickly in response to changing circumstances once they had found a job they considered to be a career (e.g., being laid off, health issues, family responsibilities). Presumably, these types of factors will continue to exert their influence on participants' career pathways as they move into their thirties and beyond (Patton & McMahon, 1999, 2006). Accordingly, policy makers may want to consider funding lifelong career guidance services such as Careers Scotland which is a publicly funded organisation that provides a single access point for the provision of career planning and support to people of all ages whatever their education and employment status might be (Howieson & Semple, 2006).

Policy makers may also want to follow Watts and Sultana's (2004) recommendation to use the 10 features of lifelong guidance systems identified by the OECD (2004a) as criteria with which to examine the adequacy of their current guidance systems and to determine priorities for action. The ten features of a coherent lifelong guidance system identified by the OECD (p. 26) are:

- transparency and ease of access over a person's lifespan
- attention to key transition points
- flexible and innovative service delivery reflecting diverse needs
- regular review and planning
- access to individual guidance for those who need it
- programmes for young people to develop self management skills
- opportunities to explore work options before choosing

- impartial advice and information
- integrated education and labour market information
- active involvement of stakeholders.

In order to implement such a system, policy makers would, according to Watts and Sultana (2004), have to address the following seven issues (pp. 119-120):

- Ensure that resource allocation decisions give the first priority to systems that develop career self-management skills and career information, and that delivery systems match levels of personal help, from brief to extensive, to personal needs and circumstances, rather than assuming that everybody needs intensive personal career guidance.
- Ensure greater diversity in the types of services that are available and in the ways that they are delivered, including greater diversity in staffing structures, wider use of self-help techniques, and a more integrated approach to the use of ICT (including helplines as well as the Internet).
- Explore the scope for facilitating measures, including appropriate incentives, designed to encourage the development of career guidance services within the private and voluntary sectors.
- Work more closely with professional associations and training bodies to improve education and training for career guidance practitioners, preferably on a cross-sectoral basis, producing professionals who can manage guidance resources as well as be engaged in direct service delivery.
- Improve the information base for public policy making, including gathering improved data on the financial and human resources devoted to career guidance, on client need and demand, on the characteristics of clients, on client satisfaction, and on the outcomes and cost-effectiveness of career guidance.
- Develop better quality assurance mechanisms and linking these to the funding of services.
- Develop stronger structures for strategic leadership.

The final point related to developing stronger structures for strategic leadership is of particular relevance to policy makers (Watts, 2005). While the OECD is a strong advocate for a lifelong career guidance approach, the reality according to Watts and Sultana (2004) is that in most OECD countries services are “a collection of disparate subsystems, including services in schools, in tertiary education, in public employment services, and in the private and voluntary sectors. Each of these is a minor part of some wider system, with its own rationale and driving forces” (p. 120).

There is a need for strong coordination and leadership on the part of governments if lifelong guidance is to be made available (Watts et al., 1997). A key role for policy makers in this regard is to develop mechanisms to bring together various guidance professionals and stakeholders to identify gaps in services and to develop plans to address them (Watts, 2005, 2008). Another function of governments in relation to coordination of services is to facilitate more cooperation between education and employment ministries and branches. Close cooperation between ministries and branches with these responsibilities is of particular importance in ensuring that a strong labour market perspective is part of a career guidance programme. A final suggestion for policy makers offered by Watts (2008) is to use three strategic instruments that could increase coherence across the range of career guidance services available in particular jurisdictions. The first instrument is a competence framework for career guidance practitioners. The second is an organisational quality standard that outlines how individuals are helped and how services are managed. The third is a list of competencies which can provide direction within the type of career guidance programmes that are developed. Watts and Sultana (2004) maintain that the utilisation of these instruments collectively could harmonise services into a lifelong career guidance system, particularly if they could be linked to common branding and marketing of services.

Increase opportunities for participation in work experience programmes. The findings of this study suggest that most young people could benefit from work experience programmes that give them the opportunity to experience career options prior to navigating toward them. Educational institutions at all levels are becoming more active in supporting student career exposure undertakings such as work experience, skills competitions, and service learning projects (Herr et al., 2004). Despite this, the majority of young people in

Canada do not participate in work experience programmes while enrolled in educational institutions and few opportunities are available after they leave the formal education system (Bell & Bezanson, 2006). In high schools, work experience programmes tend to be targeted at students who are struggling academically. As a result, most high school students who are doing well academically do not routinely have access to work experience programmes. As well, cooperative education programmes at tertiary institutions are typically limited to those who are enrolled in occupationally specific occupations such as engineering, marketing, or carpentry.

Policy makers should consider providing the resources needed to expand work experience programmes for young people who are both inside and outside of the education system. All high school students should have the opportunity to participate in work experience programmes. It may be beneficial to make such programmes mandatory for high school graduation as it would increase the likelihood that young people make more informed choices after high school. Policy makers also need to make funding available for community-based work experience programmes for young people who are not enrolled in an educational institution.

While work experience programmes are a source of valuable information for young people, so too are the experiences they gain in other venues that include formal education, paid employment, volunteer work, and extracurricular activities. As they gain more experience, young people develop new interests and skills that can inform future career decision making. The learning that occurs from experience can be greatly enhanced when young people are given the opportunity to reflect on what they have learned (Bell & Bezanson, 2006; Dyke et al., 2005). To this end, policy makers may want to consider funding portfolio learning programmes that consist of structured workshops facilitated by a trained practitioner that assist young people to identify, articulate, and document the skills and knowledge that they have acquired through their work and life experience as well as their formal education and training.

The portfolio learning process can help young people build confidence and motivation, identify their learning strengths and gaps, clarify their future career and life goals, and develop learning and action plans to achieve their goals (Morrissey et al., 2008). This approach is particularly useful for young people with limited formal education and

training because it boosts their sense of self-worth as capable learners. It is also helpful for young people who, despite having formal credentials, find themselves underemployed. The process of identifying interests and skills that they have gained in a wide variety of venues helps them to identify and attain more satisfying work because they are better able to articulate their interests and skills to employers.

Increase transfer agreements between tertiary education institutions. The findings of this thesis support findings elsewhere that non-linear learning pathways are common (Dwyer et al., 2005; Shaienks & Gluszynski, 2007). Even with better access to career guidance, young people will likely continue to move between different tertiary programmes and institutions as their interests evolve. The OECD (2008) has recommended that tertiary institutions strengthen credit transfer and articulation agreements between one another in order to foster the mobility of students between institutions. Some Canadian provinces have done extensive work on developing credit transfer and articulation agreements between providers of educational services so that young people who start on one education path but then change direction are able to receive credit for work accomplished. This is something that policy makers in all Canadian provinces should consider working towards (Saunders, 2008).

Provide information and training for parents. The findings of this study echo those of other researchers who have found that parents are extremely influential in their children's careers (Helwig, 2008; Looker & Lowe, 2001; Middleton & Loughhead, 1993; Sebald, 1989). Moreover, similar to young people in other Canadian provinces (Witko et al., 2005), participants in this study were more likely to receive assistance from family members than from professionals. These findings point to the need for policy makers to promote efforts to provide parent education programmes in intermediate and secondary schools.

While parents are the ones that young people most commonly approach for help with career planning, they often feel ill-equipped to provide guidance. Many parents are overwhelmed by the array of career and educational choices, the cost of tertiary education, and the perceived risks of giving their children the wrong advice (NSDOE, 2006). Given

the critical role that parents play in their children's career planning, policy makers may want to make a priority the provision of programmes that provide parents with the information and skills necessary to support and guide their children's career development (Helwig, 2008; Witko et al., 2005).

To accomplish this, policy makers may consider funding a programme like Parents as Career Coaches that is subsidised by the Nova Scotia government (NSDOE, 2006). This programme is offered to the parents of secondary school students and focuses on giving them the knowledge, skills, and confidence to play a constructive role in their children's career development. The objectives of the programme include helping parents to understand the process of milling and churning that often occurs as their children transition from school to work and how to identify their children's values, interests, and skills. Moreover, the programme assists parents to identify ways that they can utilise their professional and personal networks to connect their children with opportunities to explore occupations that are of interest to them. An additional emphasis in the Parents as Career Coaches programme relates to the exploration of how parental influences can be both positive and negative. Parents are counselled to be curious about their children's evolving identities and to encourage their children to investigate potential career pathways prior to engaging in a navigating strategy. However, they are also cautioned about imposing career choices upon their children that are not congruent with their children's interests, values, and skills.

Reflections on the Research

The final section of this chapter reflects on the study and identifies the methodological learning it has contained. It also discusses limitations of the study and suggests areas for future research. A key observation was that a constructivist grounded theory methodology provided a useful approach for examining the way that participants made career decisions and the factors that influenced their decisions. While other qualitative approaches have been used elsewhere to examine the ways in which young people negotiate the school-to-work transition (see for example, Dwyer et al., 2005; Vaughan et al., 2006), a constructivist grounded theory methodology does not appear to have been utilised.

The use of a constructivist grounded theory methodology was well suited to the topic of this study which was complex and multifaceted. The particulars of how participants found a career-related place after secondary school varied widely and the numerous factors that influenced their career pathways interacted in idiosyncratic ways. My constructivist stance meant that the findings of the present study were viewed as plausible accounts of participants' experiences rather than an objective truth (Charmaz, 2006). This stance ensured that I continually looked for novel ways that participants found a career-related place and how they defined such a place. It was through this process that it became clear that there were many indeterminate aspects of finding a career-related place for participants including how they characterised a career. Moreover, it became evident that the typology of search and engagement strategies was a heuristic device rather than a definitive categorisation of particular participants. In this regard, the typology reflected the constructed nature of these strategies, with participants changing their strategy utilisation in response to a range of factors that fluctuated over time.

The complexity of young people's career pathways has meant there has been a tendency for researchers to become mired in detail and to overlook the bigger picture (Clandinin & Connelly, 2000). The amount of information that participants shared sometimes led me to experience what Glaser (1998) has referred to as "data overwhelm." Fortunately, the methods associated with grounded theory helped to keep the study focussed on broader patterns and themes. The practice of coding the data immediately after data collection encouraged continual reflection on what participants were doing as they negotiated their career pathways. The constant comparative method repeatedly brought the analysis back to considering how participants' actions and the influences on their career pathways were similar to and different from one another. This technique, along with the constant writing of memos, helped the analysis move beyond simply describing what participants were doing to the development of a typology that explained how they were going about finding a career-related place.

The emphasis that the grounded theory methodology places on moving beyond describing phenomena to developing explanatory theoretical frameworks was very useful in this project because it provided a meaningful guide to intervention and policy (Creswell, 1998). The typology that was explicated through the use of a grounded theory approach

seems to hold promise in assisting young people to more effectively negotiate the school-to-work transition. The use of theoretical sampling was critical in testing and refining the typology that emerged from the data.

The use of QSR software to code interview transcripts had drawbacks. While it provided an effective way to sort and store data that represented particular codes, it was cumbersome in the early stages of data analysis as the coding structure evolved. This was particularly the case when the open codes were collapsed into focussed codes. Sometimes it was possible to simply move the data into the new coding structure. In other cases, it was necessary to recode the data that had been categorised in nodes that no longer were being used. In hindsight, it would have been more time efficient to conduct open coding on hard copies of the interview transcripts and to proceed to using QSR once the focussed codes had been established.

A great deal of effort was put into establishing the credibility of the research findings. Member checking was used extensively to ensure that the findings were a reasonable representation of the meaning put forward by participants (Lincoln & Guba, 1985). The nesting of this present project within the larger RRC study provided ample opportunities to use peer debriefing as a way of checking the credibility of the findings. The use of member checking and peer debriefing gave me confidence that the typology gave a good representation of how participants were approaching the process of finding a career-related place. In particular, the utilisation of member checking helped me to understand that the typology was best viewed as a heuristic device rather than a way of categorising the activities of young people.

In retrospect, the study would have been enhanced by the use of what Morse (2007) refers to as “theoretical group interviews” in which a small discussion group is brought together to “push the analysis towards completion” (p. 241). While the individual interviews that were conducted for the purposes of theoretical sampling served this purpose, a group discussion about strategy utilisation may have provided further insight. The employment of a group interview may have also increased the reciprocity that participants received from their involvement in the project. Hearing the experiences of others may have helped them to see the non-linear nature of their school-to-work transitions as being normal.

The recruitment methods used for the study worked reasonably well. For the most part, participants were keen to engage in the study and were insightful about the internal and external factors that had influenced their career pathways. The age range of 23-30 for inclusion in the study was intended to include participants who were old enough to have some perspective on the school-to-work-transition without being too temporally removed. The age range served its intended purpose. Many participants had a vantage point that allowed them to have insight into what had occurred in the intervening years since secondary school while at the same time still being immersed in the process of finding a career-related place. The inclusion of older participants increased the likelihood that participants would be able to see the whole process that they had engaged in to find a career-related place during their twenties. It also allowed me to see how changeable that place can be. Several participants thought they had found a long-term occupation only to have to engage in the process of finding a career-related place again as internal and external factors shifted.

My location as an insider in relation to the topic under investigation proved to be both beneficial and a drawback. The challenges that I faced during my twenties making the school-to-work transition, along with my work with young people experiencing difficulties, sensitised me to the challenges faced by many. Furthermore, the network of colleagues that I had in the career counselling field assisted greatly in gaining access to young adults. However, this insider knowledge also predisposed me to making too many assumptions about participants' experiences (Dwyer & Buckle, 2009). My extensive professional and personal experience with the topic of the present study required me to continually make my bias transparent and to interrogate my findings through member checks and peer debriefing to ensure that the findings were a reasonable representation of participants' experiences rather than simply a reflection of my own bias.

In considering these findings, it is important to note that the diversity of the participants in this project was constrained. While there was wide variation in the pathways that young people took in relation to tertiary education and some diversity in terms of their socioeconomic backgrounds, the sample was restricted to those who had graduated from secondary school. The study also lacked diversity in relation to the ethnic backgrounds of participants. The present sample was also limited in that it did not include young people

who had physical, cognitive, or psychiatric disabilities. A similar project that included a more diverse sample would create a fuller picture of how young people are making career decisions and the factors that influence the career pathways that they take.

The study was also confined to the experiences of young people whose school-to-work transition occurred in a particular type of education and training system at a particular point in time. It would be useful to conduct a comparable investigation with young adults in jurisdictions which have different education and training systems. In the Canadian context, replicating the study in the province of Quebec would help to explicate the impact of systems on strategy utilisation. Quebec differs from other Canadian provinces in offering a two year CEGEP programme after the completion of secondary school.³³

Each generation faces a specific set of life circumstances that influence the way they make their transition to adulthood (Dwyer et al., 2005; Schoon & Silbereisen, 2009). As a result, the transition experience of past and future generations of young people may be quite different from those of participants in this study. Thus, it would be valuable to conduct an analogous study in the same geographical locations at some point in the future to determine in what ways young people's transition experiences have remained the same and what aspects have changed.

Another limitation of the study related to its sole focus on participants' career pathways. In the early stages of the research, it became clear that the process of finding a place was not limited to making choices about career pathways. The use of a constructivist grounded theory methodology helped me recognise this expanded understanding of finding a place that was important to the participants, but not reflected in the original questions used to guide the study. The degree to which both career and other forms of identity development are intertwined is clear but the limited focus of the research to career paths suggests the need for a more comprehensive study that broadly examines how the search and engagement strategies are also part of other forms of identity exploration. As recognised elsewhere, the decade after secondary school is a time in which other aspects of

³³ There are 48 CEGEPs situated in the Canadian province of Québec that provide the first stage of higher education. Students enter CEGEP after completing six years of elementary school and five years of secondary school. A unique feature of CEGEPs is the co-existence of pre-university programs, leading to university studies, and technical career programs, which prepare students to enter the job market. Regardless of their programme, students take general education courses, some of which are common to all.

young people's lives may be as or more important than finding satisfying employment (Arnett, 2004; Dwyer et al, 2005). Ball et al. (1999) have noted that employment and education may be "totally irrelevant, for extended periods, compared with other more pressing or more engaging aspects of their lives—relationships, leisure activities, pregnancy, coping with poverty, and surviving social and personal distress" (p. 202). This reality could be seen in the narratives of some participants. For example, Alan noted that he was oblivious to finding a career pathway in the years immediately following secondary school because he was immersed in the challenges of coming to terms with his sexual orientation. The impact of relationships and parental responsibilities was examined in this study in relation to its impact on the strategies that participants used. However, the presence of alternative priorities was not probed in detail. Future research could address the range of priorities that young adults have and how they impact on their career pathways.

This study has advanced six career design principles that may help young people take action in relation to finding career pathways amid the inherent unpredictability of such an endeavour. The career design principles promote the open-systems thinking that is advocated by Pryor and Bright (2007) in their chaos theory of careers. It may be useful for future research to look at the efficacy of using the career design principles in career counselling with young people.

Concluding Statement

In closing, this project has demonstrated the need for advisors, policy makers, and young people themselves to acknowledge that uncertainty and change are inherent parts of most young adults' career pathways. Margaret Wheatley's book *Leadership and the New Science: Discovering Order in a Chaotic World* (1999) speaks to the difficulties of dealing with the contingencies of career pathways, not only for young people, but for all of us:

This need to discover for ourselves is unnerving. I keep hoping I'm wrong and that someone, somewhere, really does have the answer. But I know we don't inhabit that universe any longer. In this new world, you and I have to make it up as we go along, not because we lack expertise or planning skills, but because that is the nature of reality. Reality changes shape and meaning as we're in it. It is constantly

new. We are required to be there, as active participants. It can't happen without us, and nobody can do it for us. (p. 174)

This thesis suggests it is imperative that practice and policy take into account that many young people's career pathways are subject to unpredictability and non-linear change. Of all of the things that young people need to assist them with the school-to-work transition, perhaps the most important is the support and patience of family members and professionals while they engage in the crucial work of constructing an identity and producing a career in a complex and unpredictable environment.

Appendix A Ethics Approval



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1 June 2007

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Dear Catherine

Re: HEC: Southern B Application – 07/12
Stories of transition: Exploring the antecedents of career and educational choices
among young adults

Thank you for your email dated 30 May 2007.

On behalf of the Massey University Human Ethics Committee: Southern B I am pleased to advise you that the ethics of your application are now approved. Approval is for three years. If this project has not been completed within three years from the date of this letter, reapproval must be requested.

If the nature, content, location, procedures or personnel of your approved application change, please advise the Secretary of the Committee.

Yours sincerely

Dr Karl Pajo, Chair
Massey University Human Ethics Committee: Southern B

cc Ms Jackie Sanders & Prof Robyn Munford
School of Sociology, Social Policy
& Social Work
PN371

Prof Paul Spoonley, HoS
School of Sociology, Social Policy
& Social Work
PN371

Massey University Human Ethics Committee
Accredited by the Health Research Council



Appendix B Amended Ethics Approval



Massey University

2 March 2009

Catherine Campbell
6126 Cedar Street
Halifax NS
CANADA B3H 2J5

OFFICE OF THE ASSISTANT
TO THE VICE-CHANCELLOR
(Research Ethics)
Private Bag 11 222
Palmerston North 4442
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T 64 6 350 5573/350 5575
F 64 6 350 5622
humanethics@massey.ac.nz
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gtc@massey.ac.nz
www.massey.ac.nz

Dear Catherine

Re: HEC: Southern B Application – 07/12
Stories of transition: Exploring the antecedents of career and educational choices
among young adults

Thank you for your letter dated 23 February 2009 outlining the change you wish to make to the above application.

The change (to interview additional research participants) was approved and noted.

If the nature, content, location, procedures or personnel of your approved application change, please advise the Secretary of the Committee. If over time, more than one request to change the application is received, the Chair may request a new application.

Yours sincerely

A handwritten signature in black ink, appearing to be 'Karl Pajo'.

Dr Karl Pajo, Chair
Massey University Human Ethics Committee: Southern B

cc Ms Jackie Sanders & Prof Robyn Munford
School of Sociology
PN371

Prof Paul Spoonley, HoS
School of Sociology
PN371

Massey University Human Ethics Committee
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To Kaitiaki
Ki Pūrehuroa


Appendix C

Transcriber's Confidentiality Agreement

Laura Swain

9028648385

p. 2

 **Massey University**
School of Sociology, Social Policy, and Social Work
Private Bag 11 222 Palmerston North, New Zealand

 **DALHOUSIE UNIVERSITY**
Inspiring Minds
Faculty of Health Professions

Stories of Transition

Transcriber's Confidentiality Agreement

I Laura Swain (Full Name -Printed) agree to transcribe the tapes provided to me. I agree to keep confidential all the information provided to me.

I will not make any copies of the transcripts or keep any record of them, other than those required for the project.

Laura Swain
Signature

May 31/07
Date

Appendix D Letter of Information



*School of Sociology, Social Policy, and Social Work
Private Bag 11 222 Palmerston North, New Zealand*



*Inspiring Minds
Faculty of Health Professions*

As part of a team of researchers led by Dr. Michael Ungar and myself, funded by the Canadian Education Research Institute for Counselling, I am conducting a research project which is examining what happens to young adults who completed secondary school in Atlantic Canada. The research at the Halifax site will also be used to meet the requirements for my PhD programme at Massey University in New Zealand.

I am meeting with thirty to forty young people in Halifax who have taken a variety of different educational paths after graduation and who are either unemployed, underemployed, well-employed, and/or are still students. In addition, research assistants in Calgary and PEI will each be talking with thirty to forty young people. We are talking with 120 young people in three different sites in order to get a broad understanding of the many pathways and experiences young people are having.

I am locating participants for the research by asking people in the community (friends, research participants and professionals) whether they know of young people in the community who meet the criteria and have followed a broad range of pathways since leaving secondary school. The criteria for participation are that you are between the ages of 24-28 and have graduated from a secondary school in Atlantic Canada.

More details about the study are below. This description tells you about any potential risks. Participating will likely not benefit you, but we might learn things that will benefit others. If you have any questions, please ask them at anytime.

We expect that our results will help young people and the adults who help them make career and education decisions like parents and guidance counsellors, better understand the challenges facing secondary school graduates and the many possible paths they may follow when continuing their education and finding employment.

Right now, I first need to ask you some general questions about yourself, like your age and where you went to secondary school, if and when you completed your education, and what you are doing now. Based on your answers, I may ask you to meet with me individually for a longer interview. We are only asking to meet with people who have had a wide variety of different experiences. If selected, we would meet at a time and place convenient for you. The topics to be covered in the interview include the paths you took to arrive at the place you are now in life and your experiences along the way. I will ask you about the supports you have received and what you found helpful and unhelpful.

Your participation is of course entirely voluntary. You may feel free to answer only those questions with which you feel comfortable. I want to emphasize again, that I (or a member of the research team) will be the only ones who see the complete transcripts of our talk together. What you say in the interview will be confidential.

If selected, your initial audio taped interview will take between one and two hours and be transcribed by someone who does not know you and who has signed a confidentiality agreement promising to keep all

information confidential. If you want, I will send you a copy of the transcript so that you can add or clarify what you said in the interview. After you have had a chance to look over the transcript, I will contact you to do a short 15-30 minute follow-up interview to get your comments on the transcript and on the themes that are arising from the research. This follow up interview will be at a time convenient for you

If you decide to participate in the research, you have the right to not answer any of the questions that are asked. As well, you can stop your participation at any time during or after the interview and by doing so any information you have provided will be destroyed

All the information you provide will be kept strictly confidential and will be stored in a locked cabinet and on a computer that is password protected for five years after which it will be housed in the archives of the International Youth Resilience Project at Dalhousie University. The audiotapes will be destroyed once the transcripts are finalized. I would like to assure you that only members of the research team listed below will have access to the information you provide in its entirety. All identifying information will be removed from transcripts of interviews and other data so that young people who participate in this research will not be able to be identified.

It is important for you to know that I am not interested in the responses of any one person, but rather the group response that emerges from the many individuals, such as yourself, taking part in the study. If you do agree to be interviewed, please be assured you may end your involvement with the study at any time.

Should you at any time feel uneasy about what is discussed and would like to talk to a mental health counsellor about issues brought up during this research, you can make contact with a professional whose name will be provided to you. These services will be provided free of charge. Please feel free to contact the counsellor should you feel the need.

Once information has been collected members of the research team intend to publish the information in books and journals and design a couple of handbooks that will help parents and professionals advise young people on future career and educational paths. Should we use a quote from an interview with you, we will ensure that your personal details are changed sufficiently (like your age, school, work, where you live, what your parents/guardians do, those kinds of things about you) to make it impossible for anyone to identify the quote as coming from you. Please indicate on the Consent Form whether or not you wish for me to send you a copy of the final report when the study is completed.

I have provided my phone number and Dr Ungar's in the event that you have any questions about any aspect of your participation in this study. This project has been reviewed and approved both by the Social Sciences and Humanities Human Research Ethics Board at Dalhousie University and Massey University Human Ethics Committee in New Zealand: Southern B, Application 07/12. If you have any concerns about the conduct of this research, please contact the Human Research Ethics Administrator at Dalhousie University's Office of Human Research Ethics, Pat Lindley. She can be reached at 902-494-1462 or patricia.lindley@dal.ca.

Many thanks for taking the time to look over this letter.

Sincerely,

Cathy Campbell, B.Ed, M.S.W.

Project Coordinator

Tel: (902) 420-1661 email: cathy.campbell@nsc.ca

Michael Ungar PhD

Associate Professor – Dalhousie University

Tel: (902) 494-3445

Appendix E
Participant Consent Form



School of Sociology, Social Policy, and Social Work
Private Bag 11 222 Palmerston North



Inspiring Minds
Faculty of Health Professions

I have read the Letter of Information, and have had the nature of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time. I consent to participate in this research under the conditions set out in the Letter of Information. I understand this consent relates to the following: (please put a check mark beside each statement that you consent to)

- Information will be collected from me directly
- Information I share will be audio taped
- The transcript of my interview will be placed in an official archive and all details identifying me will be removed from the transcript
- Information will be gathered from me during a short follow-up interview by phone (or in person if I so choose)
- It is possible that quotes from my interview will be used in publications such as books and articles and on the web. I understand I will not be identified in these quotes and changes made to the content of those quotes to ensure my confidentiality

I would like a summary of the final report when the study is completed. yes no

I would like my audio tape returned to me yes no

I would like a copy of the transcript sent to the address or e mail address below (please circle one which one)

I understand that I may discontinue my participation at any time and by doing so any information I have provided will be destroyed. Should I have any questions at a later date, I understand I may contact the researcher.

Signature of participant

Date

CONTACT INFORMATION

Full name (please print)

Street address Town/City/Rural route

Email address

Province Postal code

Home phone number

Cell number

Appendix F
Comparison of RRC and Present Study

Aspect of Study	RRC Study	Thesis
Funding	CERIC	Social Sciences and Humanities Research Council of Canada
Methodology	Constructivist grounded theory	Constructivist grounded theory
Methods	Semi-structured interview guide; open coding, focussed coding, comparative methods, and memo writing	Same methods as those used with the RRC study with the addition of theoretical sampling
Research Team	Author of thesis, research assistants at the Montague, Guelph and Calgary sites who conducted initial interviews; Dr. Michael Ungar (RRC) Advisory committee: Dr. Kris Magnusson (Simon Fraser University), Dr. Sandy MacDonald (Superintendent, Eastern School Board, PED); Laurie Edwards (Career and Transition Services, Nova Scotia)	Author of thesis conducted the interviews for the 27 participants at the Halifax site. In addition, twenty interviews were held by the author of the thesis with participants living in Guelph, Calgary, and Montague as part of theoretical sampling.
Sites	Halifax, Nova Scotia Montague, Prince Edward Island Guelph, Ontario Calgary, Alberta	Halifax, Nova Scotia Theoretical sampling from remaining RRC sites
Ethics Approval	Dalhousie University - Social Sciences and Humanities Human Research Ethics Board	Massey University's Human Research Ethics Committee

Sampling	100 interviews were conducted. A maximum variation purposeful sampling strategy was utilised in order to sample young people with a range of educational and employment experiences	Twenty seven participants drawn from Halifax, Canada, sampled to the point of saturation in one setting. Fourteen of the 27 agreed to participate in second interviews. In addition, 20 purposefully selected participants from other regions who participated in the RRC study who were information rich in terms of delineating and refining the emerging typology.
Data Gathering	Began in February, 2007 at the Montague site; April, 2007 at the Calgary site; June, 2007 at the Halifax site, and July, 2007 at the Guelph site	Began June 2007
Data Analysis	The author of the thesis coded all 100 interviews. A typology of five strategies was delineated along with factors that influenced participants' career pathways. Data analysis for the RRC study was completed in June, 2008	Data analysis was supplemented significantly for the purpose of the thesis through the theoretical sampling process. The additional sampling and data analysis provided insight into how the internal and external factors identified in the RRC study impacted on the strategies utilised by participants. It also brought to light the consequences that participants experienced as a result of using the various strategies.
Use of Extant Literature	The primary literature accessed for the RRC study was related to findings from the emerging adulthood literature that emphasises the role that identity exploration plays in the school-to-work transition. In addition. Canadian quantitative studies on the pathways taken by secondary school graduates were referenced.	Introduced the youth transitions and chaos-oriented approaches to career development. These additions were made based on analyses of the data from which emerged new themes not found in the RRC study.

Appendix G
Consent Form for PhD Study



Massey University

School of Sociology, Social Policy, and Social Work
Private Bag 11 222 Palmerston North

PARTICIPANT CONSENT FORM

I have had the nature of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time. I understand this consent relates to the following: (please put a check mark beside each statement that you consent to)

- Information will be collected from me directly
- Information I share will be audio taped
- It is possible that quotes from my interview will be used in publications such as books and articles and on the web. I understand I will not be identified in these quotes and changes made to the content of those quotes to ensure my confidentiality

I would like a summary of the final report when the study is completed. yes no

I would like my audio tape returned to me yes no

I understand that I may discontinue my participation at any time and by doing so any information I have provided will be destroyed. Should I have any questions at a later date, I understand I may contact the researcher.

Signature of participant

Date

CONTACT INFORMATION

Full name (please print)

Street address Town/City/Rural route

Email address

Province Postal code

Home phone number

Cell number

Appendix H Interview Schedule

Introduction:

The Letter of Information explained the purpose of this research. All the information you provide will be treated as confidential and will be stored in a locked cabinet at Dalhousie University. As discussed in the Letter of Information, your involvement is entirely voluntary and please be assured you can end your involvement with the study at any time. Should you feel uneasy about what is discussed and would like to talk to a mental health counsellor about issues brought up during this research, you can make contact with Clarence DeSchiffart at the telephone number 491-3531. A card will be given to you with this information on it. Please feel free to contact the counsellor should you feel the need.

I now have some questions for you that you can take as much time as you would like to answer. There are no correct ways to respond. I would like to understand your thoughts on the many different experiences you have had since graduating high school as well as some details of what your hopes and dreams were at the time you graduated. I am not looking for information about other people just about your own experiences. You don't need to tell us the names of other people who have been part of your life. In our final report, your identity and anyone else that you talk about will be changed.

Describe Experiences:

- I would like to start with what you are doing right now?
 - Work
 - Education
 - Unpaid work
 - Unemployed
 - Travel
 - Time Out
 - Other
 - Education
- What have you been doing since you graduated from high school?
- What experiences have been significant in helping you figure out what education and career pathways to follow? In what way were they significant?
- It is common for young people to choose something like to go to school, take a job, or do other things that in retrospect seem like dead ends or detours in terms of finding a suitable education or career pathway. What, if any, detours or dead ends have you taken since you left high school?

- What has been the most difficult part of making the transition from high school?
- Could you describe the most important lessons you have learned from the experiences you have had since leaving high school.
- Tell me about how your views have changed about education and careers since graduating from high school?

Aspirations

- Thinking back to the day you graduated from high school, what did you aspire to do or become?
 - Amount of education
 - Type of work
 - Type of lifestyle
 - Travel
 - Other
- What do you aspire to do now?
 - Amount of education
 - Type of work
 - Type of lifestyle
 - Travel
 - Other
- If your aspirations have changed since you graduated from high school, how do you account for the change?

Now, I would like to find out who or what supported you and what stood in your way as you tried to find suitable educational and occupational pathways. Resources can come from both inside and outside a person. I will start by asking about internal resources.

Resources (Internal & External)

- What resources do you have personally that have helped you since you left high school?
 - Skills
 - Attitudes
 - World view
 - Spirituality
- What supports, if any, have you received from outside of you?
 - Financial

- Emotional
 - In kind
 - Information
 - Cultural knowledge expertise?
- Were there any supports that you needed that were not available? Please explain.
 - Thinking about all the ways people tried to help you find a suitable educational and career pathway, has there been anything that stands out in your mind as especially good? How about anything that was especially bad?
 - What, if anything, did your parents do or say that helped you find suitable educational and career pathways after high school? What else, if anything, do you think they should have done or said?
 - What, if anything did your guidance counsellors do or say that helped you find suitable educational and career pathways after high school? What else, if anything, do you think they should have done or said?

Barriers

What, if anything, has made it difficult for you to do what you wanted to do since leaving high school?

How have you dealt with these roadblocks?

Messages

The next question may be particularly difficult to answer. Young people receive many messages from their family, friends, and from society about what they should and shouldn't do. They may or may not say them out loud but young people often know what the messages are. If you aren't sure, take your best guess at what the messages were or are.

- What messages did you receive about what you should have done after leaving high school?
 - Parents
 - Other family members
 - Friends
 - Guidance Counsellors
 - Teachers
 - Others
- What messages have you received about what you have actually done?

- If there are differences with what your family, friends, and/or society want you to do and what you want to do, how do you cope with those differences?

Advice

- Suppose I was an 18 year old who was going to graduate this year from high school, what advice would you give me?
 - What advice would you give if they weren't sure what to do after they graduated from high school?
- What advice would you give to parents about how they can best help their children with educational and career planning?
- What advice would you give to high school guidance counselors, teachers and career counsellors about how they can help young people make educational and career plans?
- That covers the things I wanted to ask. Is there anything you might not have thought about before that occurred to you during this interview?

Before I finish, I have a few demographic questions to ask you. (Fill out demographic sheets)

Closing Comments:

We would like to send you a copy of the transcript of our discussion today so you can look it over and add any other comments that may come to mind. One of the researchers will telephone or meet with you to get your comments on the transcript in a couple of weeks. Our second meeting, either by phone or in person, will give us a chance to ask you what you think of the interview today and some other questions which come to mind between now and then. We will also be able to let you know what we are finding through our research. It is important to us that you have an opportunity to tell us whether what we are finding makes sense to you. Of course, whatever you said here today will be treated confidentially. Do you have any final questions for me? Thank you.

Appendix I Demographic Questions

Participant ID # _____

Date of Interview _____

- Age _____
- Where was the high school located that you graduated from? _____
- Gender _____
- Ethnicity _____
- How do you describe any disabilities you may have? _____
- What kind of work does your father do or used to do? _____
- What kind of work does your mother do or used to do? _____
- If they have ever had a job before, ask the following questions
 - What is the job title of your present job (or the last one they had if they are not working right now)? _____
 - Which of the following best describes your job (or the last one they had if they are not working right now)?
 - Full time - permanent (30 hr or more)
 - Full time- temporary
 - Part-time-permanent (less than 30 hours)
 - Part time – temporary
 - Self employed
 - Coop work placement
 - Internship
 - Volunteer work
 - Other
 - Which of the following do you consider yourself to be in relation to your present job (or the last one they had if they are not working right now)?
 - Overemployed (job is beyond the skills and knowledge I presently have)
 - Well employed (job is a good match with my skills, knowledge and education)

- Under employed (I am not able to fully use my skills, knowledge, and education.)
- If they have attended post secondary education, ask the following
 - What is the highest level of education you have attained?
 - Certificate
 - Diploma
 - Vocational Ticket
 - Bachelors degree
 - Professional degree
 - Masters degree
 - Doctorate degree
 - Others. Please specify

Appendix J

Examples of Open Codes

- knowing what they want
- being lost
- taking deciding time
- partying
- accumulating independence
- dealing with relationship problems
- confronting their sexual orientation
- leaving when it didn't fit
- drifting from one thing to another
- experiencing unexpected events
- having emotional support
- adapting to university
- learning more about themselves
- resisting messages
- going along with messages
- facing a deadline
- working with uncertainty
- learning about the world
- settling for something that didn't fit
- becoming ill
- receiving critical messages
- having financial support
- getting space

Appendix K

Examples of Early Memos

Memo # 1

I've been noticing in a number of the interviews some of the strategies that participants are using when those around them are not supporting them to do what they want to do. Some of them say they don't know what they want to do. Others do something that is supported by those around them even when they have their doubts that it is a good fit. Still others do it anyway. Both Vanessa and Ravi took a time out despite being criticised for doing so. By doing it anyway and showing that it was a valuable thing to do, they were able to get their naysayers onside (For Vanessa, it was her great aunt and for Ravi, his mother).

The problem is that these critical messages make it very difficult for young people to do what they need to do to pursue their dreams or taking a time out to figure out what they really want out of life. The messages are like trying to think while a radio is blaring. It is hard for a young person to figure out what they really want because there is so much noise about what they should or should not do.

Memo #2

It's interesting to see the different reactions participants have to uncertainty. It really scares Elizabeth who is doing everything she can to hold her doubt about her pathway at bay. Others like Andy and Ravi seem to thrive on uncertainty. Still others like Vanessa learned over time to live with it. I wonder if most young people are looking for certainty when they graduate from secondary school and grow to be more comfortable with uncertainty as time goes on. Given that uncertainty seems to be an integral part of the school-to-work transitions, parents and counsellors need to help young people build flexibility into their plans.

Appendix L

Examples of Middle-stage Memos

I've been wondering what terms best describe what young people are doing. Is it more accurate to think about them "having experience" or "experimenting"? Experimenting suggests that their actions are more proactive than they actually are for most. They have experiences at high school/tertiary education, experience through paid and unpaid work, and experiences outside school or work. These experiences help them to get to know themselves better and to become more aware of what is out there. In many cases, these experiences happen as much or more through luck or serendipity than through planning. (The literature about the role of chance events on individual's career would certainly support this view.)

I was just coding Rebecca's interview transcript which nicely captures the importance of experiences on identity development. (This is similar to the point that Arnett makes in relation to the central role of identity exploration in the late teen and early twenties.)

I think now I feel more secure in my values and what I want to, what I want to have in my life. For a long time, and even after university I didn't feel I really knew myself and I think it took travelling and time off and different jobs that I ye or nayed to help me figure that out and then sort of, in a way dissecting the jobs or the things that I said no to figure out why I said no to those. So I think I just needed more life experience between university and now to, I can't pinpoint what exactly to know but just things had become clearer and I feel now I know myself better, just through those experiences than I did after university.

Different Ways of Getting Experiences

Experiences outside an educational institution or work. Some gained important career-related experiences through the environments in which they grew up. Elizabeth knew from a young age that she wanted to enter the tourism and hospitality industry. This was based on staying in a variety of hotels and inns as she travelled with her parents. Carly

decided to become a nurse based on caring for her sick grandmother. Others were based on adversity that they experienced. Kate was attracted to counselling through the struggles she had resisting the messages to stay in unsatisfying work while Nora was attracted to counselling because her friends always came to her with their problems. Val developed an interest in working with disabled children as a result of having a disabled child herself. Mike based his decision to go into golf management on his love of the game. Some found the work their parents do appealing (I'm thinking of Andy, Lyle, and Jeff). Alan's interest in politics came from helping his father as he campaigned for municipal politics. Anna became interested in being an emergency room physician based on her experience working with the volunteer fire department in her community.

Experiences at high school or tertiary education. The seed was planted for some participants through courses they took in high school. Shawn who became a chartered accountant became interested through an accounting course. Ben who became interested in being an entrepreneur through taking an entrepreneurship course. Lucy who had a passion for office administration attributed this to a coop placement that she had in high school in an office.

Even more common were participants who become interested through taking courses at a university or polytechnic. Anna discovered her passion for environmental science through an ecology course she took in her second year of study. Will who planned to go into business for himself discovered an interest in corporate law through a business ethics course. Emma who started in sciences at university quickly realised through taking a writing course that she wanted to be a writer.

In some cases, they changed their plans because they either did not enjoy the courses or found them too difficult. One young woman who planned to become a French teacher quickly realised that while she enjoyed speaking French, she wasn't interested in studying it. Another who thought she wanted to be an architect quickly realised that the mathematics and physics required were not to her liking.

Cooperative education placements are a great way of exploring within a particular field. It helped participants to discover which parts of a field they like or dislike. The placements have been instrumental for many participants in ascertaining whether or not

they want to be in the field and what aspect of the field most interests them. I'm thinking of the young woman who quickly realised she didn't want to be a vet after doing a co-op placement at a vet clinic. However, there are limitations to such placements, particularly at the tertiary level. They tend to be available in occupationally specific tertiary programmes. Often, participants were quite far along in a programme by the time they realised that it wasn't a good fit.

Experiences at work. Both paid and unpaid work were common—and, in some cases, the primary—avenues for participants to explore what they wanted to do and, just as importantly, what they didn't want to do. If they liked an occupation, they stayed in it; if they didn't like it, they left it. Scott realised after a series of unstable jobs that he wanted something more secure. Jeff realised that he didn't want to be a “poor musician” after getting tired of “living out of a storage closet.”

Sometimes they stumbled on an interest through taking a job. Alan fell in love with public relations through his work with the student union at the university he was attending. Anthony took a job as a dental technologist even though he knew little about it. It was through working in the field that he realised he liked the work. Jason realised he loved working with kids through working at an after-school recreation programme for kids. He hadn't realised this prior to taking the job. In fact, he had been quite sure he didn't like working with kids and only took the job because he needed to make money (Another example of a chance event related to an unintended exposure to an interest area).

It seems that gaining more experience was central to finding a career-related place. It is through various experiences that participants learned more about themselves and the options that were out there, met mentors and role models, expanded their network, found people who supported what they wanted to do, gained confidence, developed skills, and put themselves in the way of chance events.

Appendix M

Examples of Later Memos

Memo #1

Clearly, exploration is critical to the way participants are finding a career-related place. There seem to be three different strategies they use to explore: drifting, investigating, and navigating. Participants who drifted, went with the flow. They did what was in front of them. Their exploration occurred in a haphazard fashion. But drifting is one way of learning more about themselves and about the options available to them. (This is similar to what Flum & Blustein, 2000, talk about). Stacey has utilised a drifting strategy in the immediate years after high school but has learned a lot about herself and the work world through her experiences.

Other participants went about their explorations in a more systematic fashion - they make a decision to investigate a particular field of work or study based on it being of interest to them or something they thought they would be good at. They may find out with further investigation that they don't like it but they gain valuable information because knowing what they don't want or aren't good at is essential in terms of finding a suitable place.

Navigators choose to pursue particular education programmes and/or occupations. Some navigators do considerable research prior to choosing education programmes or occupations while for others their choices are made with guesswork or they are unduly influenced by others expectations. In the process of navigating towards their chosen fields, there is still a process of exploration occurring. As they navigate, they may run into options that they prefer to what they have chosen; or they may decide to continue in their present situations as further exploration reassures them that they have made suitable choices. For some, they knew what tertiary programme they wanted to complete but had no idea what they wanted to do in terms of a career.

Memo # 2

I've been thinking about how this typology might fit the experiences of participants that I have previously interviewed. Elizabeth appeared to be a Navigator immediately after high school. She knew that she wanted to go into hotel management when she graduated from high school. As she has found out more about the realities of the hotel business, she started to explore other options within the field such as events management. During our first interview, she indicated that her dream of being a hotel manager was starting to shatter. She was beginning to realise through her work at a hotel restaurant that she might not be very well suited to hotel management. She noted that it was this dream that had sustained her through the difficulties of the school-to-work transition. Knowing what she wanted to do gave her "something to hold on to." Here is an example of how young people can choose a path and then get stuck with the choice they have made out of fear. (Some participants got stuck because they had acquired a lot of debt getting the training for an occupation they thought they wanted to go into. Later, when they realised it wasn't for them, they didn't have the financial resources to pursue a field that interested them more). Elizabeth was terrified of not knowing what she wanted to do. During the follow-up interview, she seemed to be more relaxed about being uncertain. In the four months since our first interview, she had not been working for several months due to elective surgery. This seemed to give her the space to consider other options. She noted that she had been too busy while she was working to really think about what she wanted to do. She has started exploring some other options such as public relations and event planning that are somewhat related to hotel management.

Dylan was a navigator coming out of high school. He knew that he wanted to become a hair stylist but was thrown off course by his father's insistence that he do something that had more status. He went into a business administration programme to pacify his parents. At that point, he seemed to be drifting as he really didn't have much interest in business. He started navigating later toward becoming a hair stylist. He was able to do this through the support of his aunt. As well, a cancer diagnosis gave him the courage to stand up to his father's demands that he do a Masters degree in public administration. I asked him what he thought might have happened if he had not been diagnosed with cancer or hadn't had the support of his aunt. Dylan indicated that he would "likely be pushing

paper in Ottawa and hating my life.” It sounds like he would have ended up settling for a job.

Andy was a navigator coming out of high school. He wanted to be a music performer. Through his time at university, he realised that he didn’t want to be a full time performer. He wanted to play what he wanted to play not what people would pay him to play. He decided to teach music as a way of making a living and then perform music on the side. His parents have been very supportive of his choice. In contrast, Jeff did not get any support from his parents to be a performer. He seemed to drift because his parents wouldn’t support him to do what he wanted to do.

Vanessa was another navigator coming out of high school. She knew from the time that she was in junior high school that she wanted to be a medical doctor. She was a straight A student in high school so assumed that there would be no problem getting into medical school. She never considered what else she might be interested in doing. When she didn’t get into medical school after obtaining a B.Sc., she was completely at a loss. This started her on a five-year journey of drifting and exploring as she learned about herself through many different experiences.

Ravi drifted into university. He took time out when he realised that he was going into a lot of debt and did not know where he was headed. He worked as a server at a restaurant that was located in a hotel that is part of a large chain. He’d been offered an opportunity to start a management training programme but had turned it down because he knew he didn’t want to do that and was afraid if he started the programme he would get “sucked in.” People around him were quite surprised as it would have given him a large salary increase. This is an interesting example of what I have heard in other participants’ stories about the importance of turning down opportunities. My guess is that those who don’t do that often find themselves settling for a job they don’t particularly like. Ravi was 25 and single. He may have had to take the job if he had financial responsibilities to others. He knew what he didn’t want but was drifting. Last year, he decided to go back to school because he loves learning. He’s still not clear about what he is doing but appears to be moving into using an exploring strategy as he is taking religious studies and philosophy which are areas of interest to him.

Memo #3

I'm struck by the degree to which young people are still exploring while they appear to others to be navigating. They are in occupationally specific programmes while still not being quite sure it is what they want to do. We presume they have made a decision when in fact it is only through the process of taking the programme that they decide for sure. Several participants have indicated that they had not committed to their "chosen" occupational pathway despite being enrolled in an occupationally specific programme. Most people around them likely assumed they had made a choice when in reality they hadn't. It was like they were "pseudo-navigators." The problem is that it may be difficult not to enter the profession once so much time and money has been invested in getting the required training. It would be interesting to explore further the degree to which using a navigating strategy might lead a young person to settle for a job they don't like.

While some are navigating towards jobs they don't like, some participants have drifted into occupations that they like. Anthony is a case in point. He had no idea what dental technology was about and only decided to enter because it offered an on-the-job option and he didn't have the money to take tertiary education. He seemed to move directly from being a drifter to a navigator.

In a number of cases, I was referred to participants whom the referee thought were drifting when the participant in question didn't see it that way. People around Lyle saw him as drifting because he had been working as a bartender for the previous 18 months. However, from his perspective, he was taking the time to consider his options. At the time of the interview, he had a plan to go out West to make money so that he could buy rental properties and get into property management. He seemed to be a "pseudo-drifter"-it appeared that he was drifting when he wasn't.

Memo # 4

I've just been talking to a participant who appears to be an exemplar of someone who had committed. At the time he was first interviewed, he was very committed to his job as an engineer. It was something that he saw himself doing for a long time. However, in the intervening months, there had been a change in management and he came to dislike his job. As a result, he began exploring other options and found that he had a real interest in

financial planning. Interestingly, at the time that I spoke with him, there had been another change in management and he was back to liking his job. He was, though, beginning to think that he might like financial planning more than engineering.

This has started me thinking that committing and settling might not be so much outcomes as strategies. Maggie had settled for a job in a call centre and fully expected to be doing that long term. A change in circumstances changed all of that and she moved from settling to exploring. While those who are utilising committing and settling are likely more stable in terms of their career pathways than those who are navigating, exploring, or drifting, things can and do change quickly. It would be interesting to look at what factors might contribute to a young person moving away from settling or committing. In the first case, it related to a change in his work situation and exposure to an area of interest. In the latter cases, the changes related to an increase in self-confidence and an increase in support.

Appendix N
Self-reported Profiles of Halifax Participants Participant Consent Form

Pseudonym	Age	Gender	Primary activity	Tertiary education	Aspirations at time of high school graduation	Aspirations at the present time	Present or last position held	Suitability of employment*
Alan	25	M	Full time student in a polytechnic public relations programme	Bachelor's degree in political science	Wanted to go to university but had no particular career aspirations	Public relations work with a political party	Communications assistant (coop work placement)	Well employed
Andy	24	M	Self employed	Bachelor's degree in music	Music performer	Music teacher and performer	Music teacher and performer	Well employed

* Suitability of employment refers to the degree to which participants' current occupations match their skills. Participants were asked to assess the degree to which they thought their skills matched their employment at the time of being interviewed. If they were not employed at that time, they were asked to consider the suitability of their most recent position. Participants who self reported that they were underemployed were indicating that they believed that they had more skills than their occupation required. Those who indicated that they were well employed thought that their skills were well matched with their position.

Pseudonym	Age	Gender	Primary activity	Tertiary education	Aspirations at time of high school graduation	Aspirations at the present time	Present or last position held	Suitability of employment*
Anna	28	F	Employed permanent full time	Bachelor's degree in ecology and biology	Paramedic or emergency room physician; interests changed after taking an ecology course	Environmental scientist	Movie theatre manager	Under employed
Anthony	28	M	Employed permanent full time	None; received on-the-job training for dental technology	Geologist; did not want to take out student loans to attend university	Still interested in geology and may pursue this at some point	Dental technologist	Between well employed and under employed
Chris	28	M	Employed temporary part time	Bachelor's degree and part of Masters degree in computer science	Computer science; eventually realised that he did not like working with computers	Unsure	Dishwasher	Under employed

Pseudonym	Age	Gender	Primary activity	Tertiary education	Aspirations at time of high school graduation	Aspirations at the present time	Present or last position held	Suitability of employment*
Dylan	27	M	Self employed	Bachelor's degree in business and diploma in hair styling	Hair stylist; parents did not support this aspiration so he started a business administration programme after high school	Hair stylist	Hair stylist	Well employed
Elizabeth	24	F	Employed permanent full time	Bachelor's degree in tourism and hospitality	Hotel management	Beginning to wonder if she is suited for hotel management; looking at other options within the hospitality industry	Breakfast server	Under employed
Emma	24	F	Employed permanent full time	Bachelor's degree in English	Physician; realised over time that she was more interested in writing	Book editor and writer	Assistant production editor	Well employed

Pseudonym	Age	Gender	Primary activity	Tertiary education	Aspirations at time of high school graduation	Aspirations at the present time	Present or last position held	Suitability of employment*
Hannah	25	F	Employed permanent full time; part time university student	Currently enrolled in three university level social science courses	International development work	Social work	Immigrant settlement worker	Well employed
Jeff	28	M	First interview: self employed; second interview: employed permanent full time	University certificate in computer science	Computer networking; over time realised that he did not like working with computers	First interview: considering ways to earn better living as both an arborist and a musician; second interview: educational assistant	First interview: arborist, music teacher, and music performer; second interview: teacher's assistant for children with hearing impairments	Well employed
Jordan	23	M	Employed permanent full time	Polytechnic diploma in computer engineering and two years of a bachelor's in business	Computer networker	In the process of deciding to stay with present company or further studies in computers	Assistant manager with telecommunications company	Between well employed and under employed

Pseudonym	Age	Gender	Primary activity	Tertiary education	Aspirations at time of high school graduation	Aspirations at the present time	Present or last position held	Suitability of employment*
Julie	23	F	Employed temporary part time	Bachelor's degree in sociology	Interior decorator or fashion designer; parents did not support her aspirations and pressured her into taking a university business programme	Social work	Coordinator of an after school programme for children	Under employed
Kate	28	F	Employed temporary part time; seeking work as a counsellor	Bachelor's degree in sociology and Masters of education in counselling	Acting; realised it is a difficult way to make a living, chose to pursue in leisure time	Counsellor	Resident support worker and bricklayer	Under employed

Pseudonym	Age	Gender	Primary activity	Tertiary education	Aspirations at time of high school graduation	Aspirations at the present time	Present or last position held	Suitability of employment*
Lucy	28	F	Employed permanent full time	Polytechnic diploma in office admin.	Admin. assistant; lacked financial resources and confidence to pursue chosen field until five years after completing high school	Office manager	Data entry	Under employed
Lindsey	26	F	Employed temporary full time	Bachelor's degree in business and polytechnic diploma in human resources	Interested in helping people; studied business because she learned through a high school coop placement that social service positions were being reduced	Human resources management	Career counsellor	Well employed

Pseudonym	Age	Gender	Primary activity	Tertiary education	Aspirations at time of high school graduation	Aspirations at the present time	Present or last position held	Suitability of employment*
Lyle	24	M	Employed temporary full time	Bachelor's degree in business	Unsure; went to university because of pressure	Property management	Bartender/waiter	Under employed
Maggie	29	F	Employed permanent full time	Polytechnic diploma in office admin.	None; poor marks and lack of confidence led her to believe that she had few options	Physician	Aquaculture lab technician	Well employed
Rachelle	28	F	Researching opening a pastry business	Bachelor's degree in mathematics	Engineer; realised after first semester that she did not like it	Pastry chef	Assistant chef	Well employed
Ravi	25	M	Employed permanent full time and part time university student	Attending university part time in religious studies and philosophy	Unsure; started university after high school but left after first semester for two years because of uncertainty	Considering teaching but open to other options	Banquet waiter	Between well employed and under employed

Pseudonym	Age	Gender	Primary activity	Tertiary education	Aspirations at time of high school graduation	Aspirations at the present time	Present or last position held	Suitability of employment*
Rebecca	26	F	Employed permanent full time	Bachelor's degree in biology	Considered medicine; realised that she wanted a work-life balance that was not possible for a physician	Considering teaching and health professions other than medicine	Support worker for children with autism	Well employed
Scott	27	M	Employed permanent full time	Polytechnic diploma in engineering technology	Unsure; studied engineering technology as he missed deadlines for other programmes and felt pressured to enter tertiary education	Considering becoming a police diver	Naval electronic engineering technician	Well employed

Pseudonym	Age	Gender	Primary activity	Tertiary education	Aspirations at time of high school graduation	Aspirations at the present time	Present or last position held	Suitability of employment*
Shawn	29	M	Employed permanent full time	Polytechnic diploma in accounting and a bachelor's degree in business	Unsure; returned to high school to take courses that interested him and worked in fast food restaurants	Accountant	Accountant	Well employed
Stacey	28	F	Stay-at-home parent	None	Unsure; worked as a security guard and factory worker prior to becoming a parent	Unsure	Security guard	Well employed
Taylor	25	F	Self employed and part time seasonal	Bachelor's degree in fine arts	Art curator; started a job as an assistant curator after graduating university but left because her supervisor was abusive	Art curator or jeweller	Retail worker at a fine arts store; makes jewellery	Under employed

Pseudonym	Age	Gender	Primary activity	Tertiary education	Aspirations at time of high school graduation	Aspirations at the present time	Present or last position held	Suitability of employment*
Torin	27	M	Employed temporary full time	Bachelor's and Masters degree in biomedical engineering	Unsure; entered a university general science programme	Some type of health profession	Biomedical engineering researcher	Well employed
Vanessa	29	F	Fulltime student in polytechnic public relations programme	Bachelor's degree in biology	Physician; was not accepted into medical school	Public relations	Administrative assistant in the film industry	Under employed
Will	25	M	Full time student in law	Bachelor's degree in business	Marketing	Lawyer	Law clerk	Well employed

Appendix O
Self-reported Profiles of Calgary, Guelph, and PEI Participants

Pseudonym and location	Age	Gender	Primary activity	Tertiary education	Aspirations at time of secondary school graduation	Aspirations at the present time	Present or last position held	Suitability of employment
Adam <i>Guelph</i>	27	M	Employed full time permanent	Bachelor's degree in engineering	Engineer	Financial planner	Process engineer with an auto parts company	Well employed
Adrian <i>PEI</i>	29	M	Employed full time permanent	Polytechnic diploma in auto body repair	Auto body technician; gained qualifications but was unable to continue in field for health reasons	Paramedic	Unlicensed mechanic	Well employed
Antoine <i>Guelph</i>	28	M	Self employed	Bachelor's degree in English and political science	Considered being a lawyer because of parental pressure but did not earn high enough grades to enter law school	Unsure; his father is trying to get him started in an auction business	Real estate	Well employed

Pseudonym and location	Age	Gender	Primary activity	Tertiary education	Aspirations at time of secondary school graduation	Aspirations at the present time	Present or last position held	Suitability of employment
Ben <i>Calgary</i>	25	M	Self employed and employed full time permanent	None	Entrepreneur	Entrepreneur	Business owner and working in a factory to support his business	Well employed
Carly <i>Calgary</i>	29	F	Employed part time permanent and homemaker	Started a correspondence course in office administration but had to stop for health reasons	Nurse; stayed at home to care for grandmother; later injured in car accident and could not pursue field	Unsure as to what she will be able to do given her accident-induced physical limitations	Timekeeper (keeps track of when workers sign in and out of a workplace)	Well employed as homemaker/ underemployed otherwise
Carol <i>Calgary</i>	24	F	Employed full time permanent	Polytechnic diploma in accounting and a bachelor's degree in business	Considered sports medicine but unsure; took a variety of courses that interested her at a polytechnic then took time away from tertiary education to work	Enjoys office administration but is considering event planning and other options	Office administrator	Well employed

Pseudonym and location	Age	Gender	Primary activity	Tertiary education	Aspirations at time of secondary school graduation	Aspirations at the present time	Present or last position held	Suitability of employment
Claire <i>Calgary</i>	27	F	Employed full time permanent	Polytechnic diploma in recreation leadership management	Unsure, took a recreation leadership management course because of her interest in sports and strong organisational skills	Considering going back to take a university degree in kinesiology or to start her own business as a fitness trainer	Fitness trainer	Well employed
Galen <i>Guelph</i>	25	M	Seeking employment (lost job due to downturn in auto industry)	Polytechnic diploma in materials management	Materials management	Materials management	Production planner at auto parts company	Well employed
Jake <i>Calgary</i>	27	M	Employed full time permanent	Bachelor's degree in engineering	Software engineer	Software engineer	Software engineer	Well employed

Pseudonym and location	Age	Gender	Primary activity	Tertiary education	Aspirations at time of secondary school graduation	Aspirations at the present time	Present or last position held	Suitability of employment
Jason <i>Calgary</i>	27	M	Employed full time permanent	Bachelor's degree in kinesiology	Forest management or nursing; the university he attended did not offer either programme so he took kinesiology because of his interest in physical activity and sports	Nursing	Manager of a child and youth care programme	Well employed
Jenna <i>Guelph</i>	28	F	Employed full time permanent and part time temporary	Bachelor's degree in sociology and business administration and a polytechnic diploma in public relations	Accountant due to father's pressure; while taking accounting courses she quickly realised that it was not for her	Social work	Marketing programme specialist and waitress	Under employed

Pseudonym and location	Age	Gender	Primary activity	Tertiary education	Aspirations at time of secondary school graduation	Aspirations at the present time	Present or last position held	Suitability of employment
Jeremy <i>Guelph</i>	26	M	Employed part time permanent and part time temporary	Bachelor's degree in religious studies and certificate in youth ministry	Unsure; started a university chemistry programme because of interest and high grades in the field in high school	Considering teaching or becoming a minister	Coordinator of youth missions and international development education programmes	Well employed
Kirsten <i>Calgary</i>	24	F	Employed full time permanent	Bachelor's degree in chemical engineering	Chemical engineer	Looking into other aspects of chemical engineering	Chemical engineer	Well employed
Meg <i>Guelph</i>	24	F	Employed full time permanent	Polytechnic diploma in business administration	Teacher's assistant; did not like training programme so withdrew	Bookkeeper	Factory worker	Under employed
Mike <i>PEI</i>	24	M	Employed full time seasonal and stay-at-home parent	Polytechnic diploma in golf management	Golf pro or golf course manager; gave this up as it is not possible to make a living where he lives	Business or sales	Fisherman's helper	Under employed

Pseudonym and location	Age	Gender	Primary activity	Tertiary education	Aspirations at time of secondary school graduation	Aspirations at the present time	Present or last position held	Suitability of employment
Nick <i>PEI</i>	28	M	Employed full time permanent	Bachelor's degree in business and chartered accountant designation	Business	Chartered accountant; would like to go back to private practice when his children are older	Government financial analyst	Well employed
Nora <i>Calgary</i>	23	F	Full time student in a Masters degree in counselling psychology programme and employed part time temporary	Bachelor's degree in psychology and two years of a bachelor's degree in business	Clinical psychologist	School psychologist	Research assistant	Well employed
Oliver <i>PEI</i>	24	M	Self employed and employed part time temporary	None; has taken several training courses through the military	Unsure; worked in a pharmacy and with the naval reserves the year after graduation	Computer networker	Runs an eBay company and is a combat operator with the naval reserves	Under employed

Pseudonym and location	Age	Gender	Primary activity	Tertiary education	Aspirations at time of secondary school graduation	Aspirations at the present time	Present or last position held	Suitability of employment
Sophie <i>PEI</i>	28	F	Self employed and employed part time temporary	Completed two years of a bachelor's degree in science	Architect; she did not like the university-level prerequisite courses; realised that she loved being a music performer	Possible a sound engineer and/or continue as a music performer	Music performer and waitress	Well employed as a music performer; under employed as a waitress
Val <i>PEI</i>	28	F	Employed full time permanent	Polytechnic diploma in office administration and human services	Office administration; came to realise that she did not like the work	Educational assistant/disabilities advocate—this became an aspiration after having a disabled child	Educational assistant for disabled children	Well employed

Bibliography

- Allen, M. K., Harris, S., & Butlin, G. (2003). *Finding their way: A profile of young Canadian graduates*. Ottawa, Ontario, Canada: Ministry of Industry.
- Amundson, N. E. (2003a). *Active engagement*. (2nd ed.). Richmond, British Columbia, Canada: Ergon Communications.
- Amundson, N. E. (2003b). *The physics of life*. Richmond, British Columbia, Canada: Ergon Communications.
- Amundson, N. E., & Penner, K. (1998). Parent involved career exploration. *Career Development Quarterly*, 47(2), 135-144.
- Amundson, N. E., Poehnell, G., & Pattern, M. (2005). *CareerScope: Looking in, looking out, looking around*. Richmond, British Columbia: Ergon Communications.
- Anderson, N. (2004). *Work with passion: How to do what you love for a living*. California: New World Library.
- Andres, L. (2002). *Educational and occupational participation and completion patterns of the Class of '88: A ten year perspective*. Vancouver, British Columbia, Canada: BC Council on Admissions and Transfer. Retrieved November 26, 2006, from <http://www.bccat.bc.ca/pubs/andres2002.pdf>
- Andres, L., & Adamuti-Trache, M. (2008). Life-course transitions, social class, and gender: A 15-year perspective of the lived lives of Canadian young adults. *Journal of Youth Studies*, 11(2), 115-145.
- Arnett, J. J. (2000a). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55, 469-480.

- Arnett, J. J. (2000b). High hopes in a grim world. *Youth and Society*, 31(1), 267-286.
- Arnett, J. J. (2002). The concept of emerging adulthood. In J. J. Arnett (Ed.), *Readings on adolescence and emerging adulthood*. (pp. 17-31). Saddle River, NJ: Prentice Hall.
- Arnett, J. J. (2004). *Emerging adulthood: The winding road from the late teens through the twenties*. New York: Oxford University Press.
- Arthur, M. B., Claman, P. H., & DeFillippi, R. J. (1995). Intelligent enterprise, intelligent careers. *Academy of Management Executive*, 9(4), 7-20.
- Arthur, M. B., Inkson, K., & Pringle, J. K. (1999). *The new careers: Individual action and economic change*. London: Sage.
- Arthur, W. B. (1990). Positive feedbacks in the economy. *Scientific American*, 262, 92-99.
- Association of Universities and Colleges of Canada (2007). *Trends in Higher Education: Vol. 1. Enrolment*. Ottawa, Ontario, Canada: Author. Retrieved July 29, 2009, from http://www.aucc.ca/_pdf/english/publications/trends_2007_vol1_e.pdf
- Baer, D. (1999). Educational credentials and the changing occupational structure. In J. Curtis, E. Grabb & N. Gubby (Eds.), *Social inequality in Canada: Patterns, problems, policies* (pp. 92-106). Scarborough, Ontario, Canada: Prentice Hall & Allyn and Bacon Canada.
- Ball, S. J., Macrae, S., & Maguire, M. (1999). Young lives, diverse choices and imagined futures in an education and training market. *International Journal of Inclusive Education*, 3(3), 195-224.
- Ball, S. J., & Vincent, C. (1998). "I heard it on the grapevine": 'Hot' knowledge and school choice. *British Journal of Sociology of Education*, 19(3), 377-400.

- Barnett, R. (2004). Learning for an unknown future. *Higher Education Research & Development*, 23(3), 247-260.
- Barrow-Green, J. (1997). *Poincare and the three body problem*. Providence, RI: American Mathematical Society.
- Beaujot, R. (2004). *Delayed life transitions: Trends and implications*. Ottawa, Ontario, Canada: Vanier Institute.
- Beaujot, R., & Kerr, D. (2007). *Emerging youth transition patterns in Canada: Opportunities and risks*. Ottawa, Ontario, Canada: Policy Research Initiative, Government of Canada. Retrieved July 29, 2009, from http://www.policyresearch.gc.ca/doclib/DP_YOUTH_Beaujot_200712_e.pdf
- Beck, U. (1992). *Risk society: Towards a new modernity*. London: Sage.
- Bell, D., & Bezanson, L. (2006). *Career development services for Canadian youth: Access, adequacy and accountability*. Pathways to the Labour Market Series - No 1. Ottawa, Ontario, Canada: Canadian Policy Research Networks. Retrieved June 7, 2009, from http://www.cprn.org/documents/44474_en.pdf
- Benson, P. L. (2003). Developmental assets and asset-building community: Conceptual and empirical foundations. In R. M. Lerner & P. L. Benson (Eds.), *Developmental assets and asset building communities: Implications for research, policy, and practice* (pp. 19-43). Norwell, MA: Kluwer.
- Berger, J., Motte, A., & Parkin, A. (2007). *The Price of Knowledge 2007*. Montreal, Quebec, Canada: Canadian Millennium Scholarship Foundation. Retrieved March 27, 2009, from http://www.millenniumscholarships.ca/images/Publications/POK07_e.pdf

- Berger, P., & Luckmann, T. (1966). *The social construction of reality: A treatise in the sociology of knowledge*. Garden City, NY: Anchor Books.
- Betsworth, D. G., & Hansen, J.C. (1996). The categorization of serendipitous career development events. *Journal of Career Assessment*, 4(1), 91-98.
- Bezanson, L. (2005). *Career development: A time for transformation*. Derby, UK: University of Derby, Centre for Guidance Studies. Retrieved August 7, 2009, from www.derby.ac.uk/files/icegs_career_development_a_time_for_transformation_2004.pdf
- Bimrose, J., & Barnes, S. A. (2007). Styles of career decision-making. *Australian Journal of Career Development*, 16(2), 20-28.
- Bloch, D. P. (2005). Complexity, chaos, and nonlinear dynamics: A new perspective on career development theory. *Career Development Quarterly*, 53(3), 194-207.
- Blumer, H. (1969). *Symbolic interactionism: Perspective and method*. Englewood Cliffs, NJ: Prentice-Hall.
- Blustein, D. L. (1997). A context-rich perspective of career exploration across the life roles. *Career Development Quarterly*, 45(3), 260-274.
- Blustein, D. L. (2001). Extending the reach of vocational psychology: Toward an inclusive and integrative psychology of working. *Journal of Vocational Behavior*, 59(2), 171-182.
- Blustein, D.L., & Phillips, S. (1988). Individual and contextual factors in career exploration. *Journal of Vocational Behavior*, 33(2), 203-216.

- Blustein, D. L., Walbridge, M. M., Friedlander, M. L., & Palladino, D. E. (1991). Contributions of psychological separation and parental attachment to the career development process. *Journal of Counseling Psychology, 38*(1), 39-50.
- Blustein, D. L., Chaves, A. P., Diemer, M. A., Gallagher, L. A., Marshall, K. G., Sirin, S., & Bhati, K. (2002). Voices of the forgotten half: The role of social class in the school-to-work transition. *Journal of Counseling Psychology, 49*(3), 311-323.
- Bolland, K., & Atherton, C. (1999). Chaos theory: An alternative approach to social work practice and research. *Families in Society, 80*, 367-373.
- Borgen, F. H. (1999). New horizons in interest theory and measurement: Toward expanded meaning. In M. L. Savickas & A. R. Spokane (Eds.), *Vocational interest: Meaning, measurement, and counseling use* (pp. 383-410). Palo Alto, CA: Davies-Black.
- Bowlby, J. W., & McMullen, K. (2002). *At a crossroads: First results for the 18 to 20-year-old cohort of the Youth in Transition Survey* (Catalogue No. 81-591). Ottawa, Ontario, Canada: Human Resources Development Canada and Statistics Canada. Retrieved November 27, 2006, from <http://dsp-psd.pwgsc.gc.ca/Collections/Statcan/81-591-X/81-591-XIE2000001.pdf>
- Boyd, S., McDowall, S., & Ferral, H. (2006). *Innovative pathways from school: Taking the first step – final report*. Wellington, New Zealand: New Zealand Council for Educational Research. Retrieved June 15, 2009, from <http://www.nzcer.org.nz/pdfs/15017.pdf>
- Bradley, H., & Devadason, R. (2008). Fractured transitions: Young adults' pathways into contemporary labour markets. *Sociology, 42*(1), 119-136.
- Bridges, W. (1995). *Job shift: How to prosper in a workplace without jobs*. New York: Da Capo Press.

- Briggs, J., & Peat, F. D. (1989). *Turbulent mirror: An illustrated guide to chaos theory and the science of wholeness*. New York: Harper & Row.
- Briggs, J., & Peat, F. D. (1999). *Seven life lessons of chaos: Timeless wisdom from the science of change*. New York: Harper Collins.
- Bright, J. E. H., & Pryor, R. G. L. (2005). The chaos theory of careers: A user's guide. *The Career Development Quarterly*, 53(4), 291-305.
- Bright, J. E. H., & Pryor, R. G. L. (2008). Shiftwork: A chaos theory of careers agenda for change in career counseling. *Australian Journal of Career Development*, 17(3), 63-72.
- Bright, J. E. H., Pryor, R. G. L., & Harpham, L. (2005). The role of chance events in career decision making. *Journal of Vocational Behavior*, 66(3), 561-576.
- Brisbois, R. (2003). *How Canada stacks up: The quality of work - an international perspective*. Ottawa, Ontario, Canada: Canadian Policy Research Networks.
- Brisbois, R., Orton, L., & Saunders, R. (2008). *Connecting supply and demand in Canada's youth labour market* (Pathways to the labour market series – No. 8). Ottawa, Ontario, Canada: Canadian Policy Research Networks. Retrieved July 18, 2009, from http://www.quebec.ca/observgo/fichiers/78979_DE-6.pdf
- Brown, S. D., & Lent, R. W. (1996). A social cognitive framework for career choice counseling. *Career Development Quarterly*, 44, 354-366.
- Brown, S. L., & Eisenhardt, K. M. (1998). *Competing on the edge: Strategy as structured chaos*. Boston: Harvard Business School Press.

- Bryant, A. (2003a). Re-grounding grounded theory. *Journal of Information Technology Theory and Application*, 4(1), 25-42.
- Bryant, A. (2003b). A constructive/ist response to Glaser. *Forum: Qualitative Social Research*, 4(1). Retrieved October 5, 2009, from <http://nbn-resolving.de/urn:nbn:de:0114-fqs0301155>
- Bryant, A., & Charmaz, K. (2007a). Introduction to grounded theory research: Methods and practice. In A. B. Bryant & K. Charmaz (Eds.), *Sage handbook of grounded theory* (pp. 1-28). Thousand Oaks, CA: Sage.
- Bryant, A., & Charmaz, K. (2007b). Grounded theory in historical perspective: An epistemological account. In A. B. Bryant & K. Charmaz (Eds.), *Sage handbook of grounded theory* (pp. 31-57). Thousand Oaks, CA: Sage.
- Bryce, J., & Anderson, M. (2008). What can be learned from the roller coaster journeys of young people making ultimately successful transitions beyond school? *Australian Journal of Career Development*, 17(1), 41-49.
- Bubany, S. T., Krieshok, T. S., Black, M. D., & McKay, R. A. (2008). College students' perspectives on their career decision making. *Journal of Career Assessment*, 16(2), 177-197.
- Bütz, M. R. (1992). The fractal nature of the development on the self. *Psychological Reports*, 71(3), 1043-1063.
- Bütz, M. R. (1995). Chaos theory, philosophically old, scientifically new. *Counseling and Values*, 39(2), 84-98.
- Bütz, M. R. (1997). *Chaos and complexity: Implications for psychological theory and practice*. Washington, D.C: Taylor & Francis.

- Bynner, J. (2005). Rethinking the youth phase of the life-course: The case for emerging adulthood? *Journal of Youth Studies*, 8(4), 367-384.
- Campbell, C., & Ungar, M. (2004a). Constructing a life that works: Part 1, Blending postmodern family therapy and career counseling. *Career Development Quarterly*, 53(1), 12, 16-27.
- Campbell, C., & Ungar, M. (2004b). Constructing a life that works: Part 2, Blending postmodern family therapy and career counseling. *Career Development Quarterly*, 53(1), 12, 28-40.
- Campbell, D. K., & Mayer-Kress, G. (1997). Chaos and politics: Applications of nonlinear dynamics to socio-political issues. In C. Grebogi & J. A. Yorke (Eds.), *The impact of chaos on science and society* (pp. 18-63). New York: United Nations University Press.
- Canadian Career Development Foundation (2003). *The role of guidance in post-secondary planning*. Montreal, Quebec, Canada: Canada Millennium Scholarship Foundation. Received on June 18, 2009, from http://www.millenniumscholarships.ca/images/Publications/guidance_en.pdf
- Canadian Council on Learning (2008). *The benefits of experiential learning*. Retrieved April 8, 2010, from <http://www.ccl-cca.ca/pdfs/LessonsinLearning/Feb-21-08 - Benefit-of-experience.pdf>
- Capra, F. (1996). *The web of life: A new scientific understanding of living systems*. New York: Anchor Books.
- Carpenter, H. (2008). *The career maze: Guiding your children towards a successful future*. Auckland, New Zealand: New Holland.

- Carroll, L. (1992). *Alice's adventures in wonderland*. London: MacMillan Children's Books.
- Cartwright, T. J. (1989). Urban management as a process, not an output: Reflections on an international workshop. *Review of Urban and Management Studies*, 1(2), 107-113.
- Cartwright, T. J. (1991). Planning and chaos theory. *Journal of the American Planning Association*, 57(1), 44-56.
- Caspi, A., Wright, B. R. E., Moffitt, T. E., & Silva, P. A. (1998). Early failure in the labor market: Childhood and adolescent predictors of unemployment in the transition to adulthood. *American Sociological Review*, 424-451.
- Chaio, G. T., & Gardner, D. (2007). *Today's young adults: Surfing for the right job*. Paper prepared for MonsterTRAK. Retrieved May 15, 2009, from <http://ceri.msu.edu/publications/pdf/YAdults-16.pdf>
- Chang, R. Y. (2000). *The passion plan*. San Francisco: Jossey-Bass.
- Charmaz, K. (1990). "Discovering" chronic illness: Using grounded theory. *Social Science & Medicine*, 30, 1161-1172.
- Charmaz, K. (2000). Grounded theory: Objectivist and constructivist methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 509–535). Thousand Oaks, CA: Sage.
- Charmaz, K. (2003a). Grounded theory: Objectivist and constructivist methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *Strategies of qualitative inquiry* (2nd ed., pp. 249 - 291). London: Sage.

- Charmaz, K. (2003b). Grounded theory. In J. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (pp. 81-110). London: Sage.
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Thousand Oaks, CA: Sage.
- Charmaz, K. (2008). Constructionism and grounded theory. In J.S. Holstein & J.F. Gubrium (Eds.), *Handbook of constructionist research* (pp.397-412). New York: Guilford.
- Chen, C. P. (2006). Strengthening career human agency. *Journal of Counseling & Development, 84*(2), 131-138.
- Chope, R. C. (2005). Qualitatively assessing family influence in career decision making. *Journal of Career Assessment, 13*(4), 395-414.
- Church, A. T. (2001). Personality measurement in cross-cultural perspective. *Journal of Personality, 69*(6), 979-1006.
- Clandinin, D.J., & Connelly, M. (2000). *Narrative inquiry: Experience qualitative research*. San Francisco, CA: Jossey-Bass.
- Clark, J. (2000). From career angst to bliss: An explorer's tale. *Career Planning and Adult Development Journal, 15*(4), 93-104.
- Clark, W. (2007). Delayed transitions of young adults. *Canadian Social Trends, 84*, 14-22.
- Clarke, A.E. (2005). *Situational analysis: Grounded theory after the postmodern turn*. Thousand Oaks, CA: Sage.

- Clarke, A., & Friese, C. (2007). Grounded theorizing using situational analysis. In A. B. Bryant & K. Charmaz (Eds.), *Sage handbook of grounded theory* (pp. 363-397). Thousand Oaks, CA: Sage.
- Cochran, L. (1997). *Career counseling: A narrative approach*. Thousand Oaks, CA: Sage.
- Collin, A., & Watts, A. G. (1996). The death and transfiguration of career – and of career guidance? *British Journal of Guidance & Counselling*, 24(3), 385-398..
- Connolly, K., & Reilly, R. (2007). Emergent issues when researching trauma: A confessional tale. *Qualitative Inquiry*, 13(4), 522-540.
- Corbin, J., & Morse J.M. (2003). The unstructured interactive interview: Issues of reciprocity and risks when dealing with sensitive topics. *Qualitative Inquiry*, 9(3), 335–54.
- Côté, J. E. (2000). *Arrested adulthood: The changing nature of maturity and identity*. New York: New York University Press.
- Côté, J. E. (2002). The role of identity capital in the transition to adulthood: The individualization thesis examined. *Journal of Youth Studies*, 5(2), 117-134.
- Côté, J. E. (2006). Emerging adulthood as an institutionalized moratorium: Risks and benefits to identity formation. In J. J. Arnett & J. L. Tanner (Eds.), *Emerging adults in America: Coming of age in the 21st century* (pp. 85–116). Washington, DC: American Psychological Association.
- Côté, J. E., & Bynner, J. M. (2008). Changes in the transition to adulthood in the UK and Canada: The role of structure and agency in emerging adulthood. *Journal of Youth Studies*, 11(3), 251-268.

- Creed, P. A., Patton, W., & Bartrum, D. (2002). Multidimensional properties of the LOT-R: Effects of optimism and pessimism on career and well-being related variables in adolescents. *Journal of Career Assessment, 10*(1), 42-61.
- Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage.
- Creswell, J. W. (2007). *Qualitative inquiry and research method: Choosing among five approaches*. (2nd. ed.). Thousand Oaks, CA: Sage.
- Crompton, S. (1995). Employment prospects for high school graduates. *Perspectives on Labour and Income, 7*(3), 8-13.
- Crow, G., Hatton, P., Lyon, D., & Strangleman, T. (2009). New divisions of labour?: Comparative thoughts on the current recession. *Sociological Research Online, 14*(2/3). Retrieved July 15, 2009, from <http://www.socresonline.org.uk/2014/2002/2010.html>
- Crutchfield, J. P., Farmer, J. D., & Norman, H. (1986). Chaos. *Scientific American, 255*, 46-57.
- Cutcliffe J. (2003). Reconsidering reflexivity: Introducing the case for intellectual entrepreneurship. *Qualitative Health Research, 13*(1), 136–148.
- Davey, R. P., Bright, J. E. H., Pryor, R. G. L., & Levin, K. (2005). "Of never quite knowing what I might be": Using chaos counseling with university students. *Australian Journal of Career Development, 14*(2), 53-61.
- de Broucker, P. (2005). *From education to work: A difficult transition for young adults with low levels of education*. Paris: OECD and Ottawa, Ontario, Canada: Canadian Policy Research Networks.

- Denzin, N. K., & Lincoln, Y. S. (2007). The discipline and practice of qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Strategies of qualitative inquiry* (pp. 1-45). Thousand Oaks, CA: Sage.
- Dey, I. (1999). *Grounding grounded theory: Guidelines for qualitative inquiry*. San Diego, CA: Academic Press.
- Di Fabio, A., & Palazzeschi, L. (2009). Emotional intelligence, personality traits and career decision difficulties. *International Journal for Educational and Vocational Guidance*, 9(2), 135-146.
- Draut, T. (2006). *Strapped: Why America's 20-and 30-somethings can't get ahead*. New York: Doubleday.
- Drodge, E. N. (2002). Career counseling at the confluence of complexity science and new career. *M@n@gement*, 5(1), 49-62.
- Duarte, M. E. (1995). Career concerns, values, and role salience in employed men. *Career Development Quarterly*, 43(4), 338-349.
- Duxbury, L. (2006). Mind the gap. *Carleton University Magazine*. Retrieved May 16, 2007, from <http://magazine.carleton.ca/2006/1733.htm>
- Dwyer, C., & Buckle, J. L. (2009). The space between: On being an insider-outsider in qualitative research. *International Journal of Qualitative Methods*, 8(1), 54-63.
- Dwyer, P. J., Smith, G., Tyler, D., & Wyn, J. (2003). *Life-patterns, career outcomes and adult choices*. Melbourne, Victoria, Australia: Australian Youth Research Centre. Retrieved October 15, 2008, from http://www.edfac.unimelb.au/yrp/documents/rr_pdf/RR23.pdf

- Dwyer, P. J., Smith, G., Tyler, D., & Wyn, J. (2005). *Immigrants in time: Life-patterns 2004*. Melbourne, Victoria, Australia: Australian Youth Research Centre. Retrieved October 15, 2009, from http://www.edfac.unimelb.edu.au/yrp/documents/rr_pdf/RR27.pdf
- Dwyer, P. J., & Wyn, J. (2001). *Youth, education and risk: Facing the future*. London: Falmer Press.
- Dyke, M., Foskett, N., & Maringe, F. (2005, April). *The impact of information and experience on the decision to participate in learning in post-compulsory education*. Paper presented at the meeting of the American Educational Research Association, Montreal, Quebec, Canada.
- Ekos Research Associates and Canadian Policy Research Networks. (1999). *Analysis of Volunteering: Results from the 1997 National Survey of Giving, Volunteering and Participating* (No.R-99-11E). Ottawa, Ontario, Canada: Human Resources Development Canada.
- Emerson, R. M., Fretz, R. I., & Shaw, L. L. (1995). *Writing ethnographic fieldnotes*. Chicago: University of Chicago Press.
- Emmerling, R. J., & Cherniss, C. (2003). Emotional intelligence and the career choice process. *Journal of Career Assessment, 11*(2), 153-167.
- European Centre for the Development of Vocational Training (2005). *Improving lifelong guidance policies: Using common European reference tools*. Luxembourg, Belgium: Author. Retrieved December 28, 2009, from http://www.cedefop.europa.eu/etv/Upload/Information_resources/Bookshop/400/4045_en.pdf
- European Group for Integrated Social Research (2001). Misleading trajectories: Transition dilemmas of young adults in Europe. *Journal of Youth Studies, 4*(1), 101-118.

- Evans, K. (2002). Taking control of their lives? Agency in young adult transitions in England and the new Germany. *Journal of Youth Studies*, 5(3), 245-269.
- Evans, K. (2007). Concepts of bounded agency in education, work, and the personal lives of young adults. *International Journal of Psychology*, 42(2), 85-93.
- Felsman, D. E., & Blustein, D.L. (1999). The role of peer relatedness in late adolescent career development. *Journal of Vocational Behavior*, 54, 279-295.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Evanston, IL: Row, Peterson.
- Finch, N. (2006). Family change. In J. Bradshaw & A. Haland (Eds.), *Social policy, employment and family change in comparative perspective* (pp. 13-37). Camberly, UK: Edward Elgar.
- Finlay, L. (2002). Negotiating the swamp: The opportunity and challenge of reflexivity in research practice. *Qualitative Research*, 2, 209-230.
- Flum, H., & Blustein, D. (2000). Reinvigorating the study of vocational exploration: A framework for research. *Journal of Vocational Behavior*, 56(3), 380-404.
- Foskett, N., Dyke, M., & Maringe, F. (2004). *The influence of the school in the decision to participate in learning post-16* (Research brief 538). London: Department for Education and Skills. Retrieved May 14, 2009, from http://www.dcsf.gov.uk/research_data/uploadfiles/RR538.pdf
- Fouad, N. A., & Bynner, J. (2008). Work transitions. *American Psychologist*, 63(4), 241-251.
- Franke, S. (2003). Studying and working: The busy lives of students with paid employment. *Canadian Social Trends*, 68, 22-25.

- Freedman, J., & Combs, G. (1996). The narrative metaphor and social constructionism: A postmodern worldview. In J. Freedman & G. Combs (Eds.), *Narrative therapy: The social construction of preferred scenarios* (pp. 19-41). New York: W.W. Norton & Company.
- Fritz, R. (2003). *Your life as art*. Newfane, VT: Newfane Press.
- Furlong, A. (2000). Introduction: Youth in a changing world. *International Social Science Journal*, 52(164), 129-134.
- Furlong, A., & Cartmel, F. (1997). *Young people and social change: Individualization and risk in late modernity*. Buckingham, UK: Open University Press.
- Galambos, N. L., & Leadbeater, B. J. (2000). Trends in adolescent research for the new millennium. *International Journal of Behavioral Development*, 24(3), 289-294.
- Galassi, J. P., Crace, R. K., Martin, G. A., James, R. M., & Wallace, R. L. (1992). Client preferences and anticipations in career counseling: A preliminary investigation. *Journal of Counseling Psychology*, 39(1), 46-55.
- Gall, J., Gall, M.D., & Borg, W. (2005). *Applying educational research: A practical guide*. Boston, MA: Pearson Education.
- Gasson, S. (2004). Rigor in grounded theory research: An interpretive perspective on generating theory from qualitative field studies. In M. Whitman and A.B. Woszczyński (Eds.), *The handbook of information systems research* (pp. 79-102). Hershey, PA: Idea Group Publishing.

- Gati, I., Fassa, N., & Houminer, D. (1995). Applying decision theory to career counseling practice: The sequential elimination approach. *The Career Development Quarterly*, 43(3), 211-220.
- Gati, I., & Tal, S. (2008). Decision-making models and career guidance. In J. A. Athanasou & R. V. Esbroeck (Eds.), *International Handbook of Career Guidance* (pp. 157-186). Dordrecht, Netherlands: Springer Netherlands.
- Gelatt, H. B. (1962). Decision making: A conceptual framework of reference for counseling. *Journal of Counseling Psychology*, 9, 240-245.
- Gelatt, H. B. (1989). Positive uncertainty: A new decision-making framework for counseling. *Journal of Counseling Psychology*, 36(2), 252-256.
- Gelatt, H. B. (1991). *Creative decision making: Using positive uncertainty*. Los Altos, CA: Crisp Publications.
- Gelatt, H. B. (1993). Future sensing: Creating the future. *The Futurist*, 27(5), 9-13.
- Gelatt, H., B. (1995). Chaos and compassion. *Counseling and Values*, 39, 108-116.
- Gelatt, H. B., & Gelatt, C. (2003). *Creative decision making: Using positive uncertainty* (Rev. ed.). Boston: Thomson Crisp Learning.
- Gergen, K.J. (1994). *Realities and relationships: Sounding in social construction*. Cambridge, MA: Harvard University Press.
- Germer, C. K. (2005). Mindfulness: What is it? What does it matter? In C. K. Germer, R. D. Siegel & P. R. Fulton (Eds.), *Mindfulness and psychotherapy* (pp. 3-27). New York: Guilford Press.

- Glaser, B. G. (1978). *Theoretical sensitivity: Advances in the methodology of grounded theory*. Mill Valley, CA: Sociology Press.
- Glaser, B. G. (1992). *Basics of grounded theory: Emergence vs. forcing*. Mill Valley, CA: Sociology Press.
- Glaser, B. G. (1998). *Doing grounded theory: Issues and discussions*. Mill Valley, CA: Sociology Press.
- Glaser, B.G. (2002). Constructivist grounded theory? *Forum: Qualitative Social*, 3(3), Retrieved September 1, 2010, from <http://www.qualitative-research.net/fqs/fqs-eng.htm>
- Glaser, B.G. (2005). *The grounded theory perspective III: Theoretical coding*: Mill Valley, CA: Sociology Press.
- Glaser, B.G. & Holton, J. A. (2004). Remodeling grounded theory. *Forum: Qualitative Social Research*, 5(2), Retrieved September 10, 2010, from <http://www.qualitative-research.net/index.php/fqs/article/view/607/1315>
- Glaser, B. G., & Strauss, A. L. (1965). *Awareness of dying*. Chicago: Aldine de Gruyter.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. New York: Aldine de Gruyter.
- Gleick, J. (1987). *Chaos theory: Making a new science*. New York: Viking.
- Goldman, L. (1990). Qualitative assessment. *The Counseling Psychologist*, 18(2), 205-213.
- Goodwin, J., & O'Connor, H. (2005). Exploring complex transitions: Looking back at the 'golden age' from school to work. *Sociology*, 39(2), 201-220.

- Gray, K. C. (2000). *Getting real: Helping teens find their future*. Thousand Islands, CA: Corwin.
- Grubb, W. N. (1997). The returns to education in the sub-baccalaureate labour market, 1984–1990. *Economics of Education Review*, 16(3), 231-245.
- Grubb, W. N. (2002). *Who am I?: The inadequacy of career information in the information age*. Paris: OECD.
- Guba, E.G., & Lincoln, Y. S. (1989). *Fourth generation evaluation*. Newbury Park, CA: Sage.
- Gysbers, N.C., & Henderson, P. (2006). *Developing and managing your school guidance and counseling program* (4th ed.). Alexandria, VA: American Counseling Association.
- Haase, C. M., Heckhausen, J., & Koller, O. (2008). Goal engagement during the school-work transition: Beneficial for all, particularly for girls. *Journal of Research on Adolescence*, 18(4), 671-698.
- Haché, L., Redekopp, D. E., & Jarvis, P. S. (2000). *Blueprint for life/work designs*. Memramcook, New Brunswick, Canada: National Life/Work Center.
- Hall, D. T., & Mirvis, P. H. (1995). The new career contract: Developing the whole person at midlife and beyond. *Journal of Vocational Behavior*, 47(3), 269-289.
- Hamilton, S. F. (1990). *Apprenticeship for adulthood: Preparing youth for the future*. New York: Free Press.
- Hansen, S. L. (1997). *Integrative life planning: Critical tasks for career development and changing life patterns*. San Francisco: Jossey Bass.

- Harren, V. H. (1979). A model of career decision-making for college students. *Journal of Vocational Behavior, 14*, 119-133.
- Harris-Bowlsbey, J. A. (1985). The computer and career development: Retrospect and prospect. *Journal of Career Development, 12*(2), 111-117.
- Hart, D. H., Rayner, K., & Christensen, E.R. (1971). Planning, preparation, and chance in occupational entry. *Journal of Vocational Behavior, 1*(3), 279-285.
- Hartung, P., & Blustein, D. (2002). Reason, intuition, and social justice: Elaborating on Parson's career decision-making model. *Journal of Counseling & Development, 80*(1), 41-47.
- Hausdorf, P. (2007). Job search outcomes for university graduates: The role of economic hardship and work involvement. *Canadian Journal of Career Development 6*(1), 21-27.
- Hawking, S. (2005). Does god play dice? Retrieved June 16, 2009, from <http://www.hawking.org.uk/pdf/dice.pdf>
- Heinz, W. R. (1999). Job-entry patterns in a life course perspective. In W. R. Heinz (Ed.), *From education to work: Cross-national perspectives* (pp. 214–231). Cambridge, UK: Cambridge University Press.
- Helwig, A. A. (2008). From childhood to adulthood: A 15-Year longitudinal career development study. *Career Development Quarterly 57*(1), 38-50.
- Herr, E. L., Cramer, S. H., & Niles, S. G. (2004). *Career guidance and counseling through the life span: Systematic approaches* (6th ed.). New York: Pearson Education.

- Hiebert, B. (1993). Career education: A time for infusion. *Guidance and Counselling*, 8(3), 5-10.
- Hiebert, B. (2005). Perspectives on guidance and social inclusion in a global society. *Orientación y Sociedad* 5. Retrieved May 15, 2009, from http://www.scielo.org.ar/scielo.php?script=sci_arttext&pid=S1851-88932005000100002
- Higgins, J. (2002). Young people and transitions policies in New Zealand. *Social Policy Journal of New Zealand*, 18, 44-61.
- Higgins, J., & Nairn, K. (2006). "In transition": Choice and the children of New Zealand's economic reforms. *British Journal of Sociology of Education*, 27(2), 207-220.
- Higgins, J., Vaughan, K., Phillips, H., & Dalziel, P. (2008). *Education employment linkages: International literature review* (EEL Research Report No. 2). Canterbury, New Zealand: Lincoln University, Agribusiness and Economics Research Unit. Retrieved May 4, 2008, from <http://www.eel.org.nz/documents/EELReport02.pdf>
- Hodkinson, P., & Sparkes, A. C. (1997). Careership: A sociological theory of career decision making. *British Journal of Sociology of Education*, 18(1), 29-44.
- Hodkinson, P., Sparkes, A. C., & Hodkinson, H. (1996). *Triumphs and tears: Young people, markets and the transition from school to work*. London: David Fulton Press.
- Holton, J.A. (2006). Rehumanising knowledge work through fluctuating support networks: A grounded theory. Unpublished doctoral thesis. University of Northampton, UK.
- Holton, J. A. (2007). The coding process and its challenges. In A. B. Bryant & K. Charmaz (Eds.), *The Sage Handbook of grounded theory* (pp. 265-289). Thousand Oaks, CA: Sage.

- Holland, J. H. (1996). *Hidden order: How adaptation builds complexity*. Cambridge, MA: Perseus.
- Holland, J. L. (1973). *Making vocational choices: A theory of vocational personalities and work environments*. Englewood Cliffs, NJ: Prentice-Hall.
- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (2nd ed.). Odessa, FL: Psychological Assessment Resources.
- Hoshmand, L. (1999). Locating the qualitative research genre. In M. Kopala & L. A. Suzuki (Eds.), *Using qualitative methods in psychology* (pp. 15-24). Thousand Oaks, CA: Sage.
- Howe, N., & Strauss, W. (2000). *Millennials rising: The next great generation*. New York: Vintage Books.
- Howieson, C., & Semple, S. (2006). Career guidance in Scotland: Retrospect and prospect. *British Journal of Guidance & Counselling*, 34(1), 31-53.
- Hudson, C. G. (2000). At the edge of chaos: A new paradigm for social work? *Journal of Social Work Education*, 36(2), 215-230.
- Hudson, C. G. (2005). The dynamics of self-organization. *Journal of Human Behavior in the Social Environment*, 10(4), 17-38.
- Ibarra, H. (2003). *Working identity: Unconventional strategies for reinventing your career*. Boston: Harvard Business School Press.
- Inkson, K., & Myers, B. A. (2003). "The big OE": Self-directed travel and career development. *Career Development International*, 8(4), 170-181.

- Iyengar, S. S., & Lepper, M. R. (2000). When choice is demotivating: Can one desire too much of a good thing? *Journal of Personality and Social Psychology*, 79(6), 995-1006.
- Jacobs, S. J., & Blustein, D. L. (2008). Mindfulness as a coping mechanism for employment uncertainty. *Career Development Quarterly* 57(4), 174-180.
- Jarvis, P. S. (2002). Formula for success in career building. *Canadian Journal of Career Development*, 1(1), 40-44.
- Jarvis, P. S. (2003). *Career management paradigm shift: Prosperity for citizens, windfall for governments*. Ottawa, Ontario, Canada: National Life Work Centre. Retrieved May 18, 2009, from <http://www.contactpoint.ca/natcon-conat/2003/pdf-03-15.pdf>
- Jarvis, P. S., & Keeley, E. S. (2003). From vocational decision making to career building: Blueprint, real games, and school counseling. *Professional School Counseling*, 6(4), 244-250.
- Kabat-Zinn, J. (1990). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness*. New York: Delacorte.
- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science & Practice*, 10(2), 144-156.
- Kauffman, S. A. (1995). *At home in the universe*. London: Oxford University Press.
- Kelle, U. (2007). The development of categories: Different approaches in grounded theory. In A. B. Bryant & K. Charmaz (Eds.), *The Sage handbook of grounded theory* (pp. 191-213). Thousand Oaks, CA: Sage.

- Kellert, S. H. (1993). *In the wake of chaos: Unpredictable order in dynamical systems*. Chicago: University of Chicago Press.
- Kerka, S. (2001). *Career Exploration by Adults* (Practice brief No.14). Columbus, OH: ERIC Clearinghouse on Adult, Career and Vocational Education.
- Ketterer, J. (2006). Chaos and complexity: The uses of the foremost metaphor of the new millennium. *International Management Review*, 2(3), 34-55.
- Ketterson, T. U., & Blustein, D. L. (1997). Attachment relationships and the career exploration process. *Career Development Quarterly*, 46(2), 167-178.
- Kidd, J. M. (1998). Emotion: An absent presence in career theory. *Journal of Vocational Behavior*, 52(3), 275-288.
- Kincanon, E., & Powel, W. (1995). Chaotic analysis in psychology and psychoanalysis. *Journal of Psychology*, 129(5), 495-505.
- Kolb, D. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice-Hall.
- Koonce, R. (1995). Becoming your own career coach. *Training and Development*, 49(1), 18-25.
- Krieshok, T. S. (1998). An anti-introspectivist view of career decision making. *Career Development Quarterly*, 46(3), 210-229.
- Krieshok, T. S. (2001). How the decision-making literature might inform career center practice. *Journal of Career Development*, 27(3), 207-216.

- Krippner, S. (1994). Humanistic psychology and chaos theory: The third revolution and the third force. *Journal of Humanistic Psychology, 34*(3), 48-61.
- Krumboltz, J. D. (1992). The wisdom of indecision. *Journal of Vocational Behavior, 41*, 239-244.
- Krumboltz, J. D. (1993). Integrating career and personal counseling. *Career Development Quarterly, 42*(2), 143-148.
- Krumboltz, J. D., & Coon, D. W. (1995). Current professional issues in vocational psychology. In W. B. Bruce & S. H. Osipow (Eds.), *Handbook of vocational psychology: Vol. 2. Theory, research, and practice* (pp.1-34). Mahwah, NJ: Lawrence Erlbaum Associates.
- Krumboltz, J. D., & Levin, A. S. (2004). *Luck is no accident: Making the most of happenstance in your life and career*. Atascadero, CA: Impact Press.
- Kush, K., & Cochran, L. (1993). Enhancing a sense of agency through career planning. *Journal of Counseling Psychology, 40*(4), 434-439.
- Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing*. Thousand Oaks, CA: Sage.
- Langton, C. G. (1986). Studying artificial life with cellular automata. *Physica D, 22*, 120-149.
- Law, B., Meijers, F., & Wijers, G. (2002). New perspectives on career and identity in the contemporary world. *British Journal of Guidance & Counselling, 30*(4), 431-449.

- Lent, R. W., Brown, S. D., & Hackett, G. (2000). Contextual Supports and Barriers to Career Choice: A Social Cognitive Analysis. *Journal of Counseling Psychology*, 47(1), 36-49.
- Lewin, R. (1999). *Complexity: Life at the edge of chaos* (2nd ed.). Chicago: University of Chicago Press.
- Lewis, R. A., & Gilhousen, M. R. (1981). Myths of career development: A cognitive approach to vocational counseling. *Personnel and Guidance Journal*, 59, 296-299.
- Li, T. Y., & Yorke, J. A. (1975). Period three implies chaos. *American Mathematical Monthly*, 985-992.
- Lietz, C. A., Langer, C. L., & Furman, R. (2006). Establishing trustworthiness in qualitative research in social work: Implications from a study regarding spirituality. *Qualitative Social Work*, 5(4), 441-458.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newberry Park, CA: Sage.
- Lincoln, Y. S., & Guba, E. G. (2000). Paradigmatic controversies, contradictions, and emerging confluences. In N. K. Denzin & Y. S. Lincoln (Eds.), *The handbook of qualitative research* (2nd ed., pp. 163–188). Beverly Hills, CA: Sage.
- London, M. (1983). Toward a theory of career motivation. *Academy of Management Review*, 8(4), 620-630.
- London, M., & Noe, R. (1997). Career motivation theory: An update and directions for research and practice. *Journal of Career Assessment*, 5(1), 61–80.

- Looker, E. D., & Lowe, G. S. (2001). *Post-secondary access and student financial aid in Canada: Current knowledge and research gaps*. Ottawa, Ontario, Canada: Canadian Policy Research Networks. Retrieved March 10, 2008, from www.millenniumscholarships.ca/images/publications/cprn-bkgnd.pdf
- Looker, E. D., & Magee, P. (2000). Gender and work: The occupational expectations of young women and men in the 1990s. *Gender Issues, 18*(2), 74-88.
- Lorenz, E. N. (1993). *The essence of chaos*. Washington, DC: University of Washington Press.
- Lorenz, E. N. (2000). The butterfly effect. In R. Abraham & U. Yoshisuke (Eds.), *The chaos avant-garde: Memories of the early days of chaos theory* (pp. 91-94). New Jersey: World Scientific.
- Low, K. S. D., Yoon, M., Roberts, B. W., & Rounds, J. (2005). The stability of vocational interests from early adolescence to middle adulthood: A quantitative review of longitudinal studies. *Psychological Bulletin, 131*(5), 713-737.
- Lucas, R., Clark, A., Georgellis, Y., & Diener, E. (2004). Unemployment alters the set point for life satisfaction. *Psychological Science, 15*(1), 8-13.
- MacDonald, M., & Schreiber, R. (2001). Constructing and deconstructing: Grounded theory in a postmodern world. In R. Schreiber & P. N. Stern (Eds.), *Using grounded theory in nursing* (pp. 35-54). New York: Springer.
- Magnusson, K., & Bernes, K. (2003, May). *Perceptions of career planning needs: The importance of relational supports for students*. Paper presented at the Canadian Counselling Association Conference, Halifax, Nova Scotia, Canada.

- Marcia, J. (1993). The ego identity status approach to ego identity. In J. Marcia, A. Waterman, D. Matteson, S. Archer & J. Orlofsky (Eds.), *Ego identity: A handbook for psychosocial research* (pp. 3–21). New York: Springer-Verlag.
- Maritime Provinces Higher Education Commission (2006). *Five years on: A survey of the class of 1999*. Fredericton, New Brunswick, Canada: Author. Retrieved May 15, 2009, from http://www.mphec.ca/resources/FiveYearsOn_GFU_2006En.pdf
- Maritime Provinces Higher Education Commission (2008). *Intentions of Maritime university students following graduation: A survey of the class of 2007*. Fredericton, New Brunswick, Canada: Author. Retrieved May 15, 2009, from <http://www.mphec.ca/resources/Intentions2007En.pdf>
- Mayntz, R. (1997). Chaos in society: Reflections on the impact of chaos theory on sociology. In C. Grebogi & J. Yorke (Eds.), *The impact of chaos on science and society* (pp. 298-323). New York: United Nations Publications.
- McAdams, D. P. (1993). *The stories we live by*. New York: William Morrow.
- McAlpine, T.A. (2009). College students and career: An exploration of vocational anticipatory socialization (Doctoral dissertation, University of North Carolina at Chapel Hill, 2009). *Dissertations Abstracts International* 60(07). (UMI No. 3315648).
- McGhee, G., Marland, G. & Atkinson, J. (2007). Grounded theory research: Literature reviewing and reflexivity. *Journal of Advanced Nursing*, 60(3), 334-342.
- McKay, H., Bright, J. E. H., & Pryor, R. G. L. (2005). Finding order and direction from chaos: A comparison of chaos career counselling and trait matching counselling. *Journal of Employment Counselling*, 42(3), 98-112.

- McKean, E. (Ed.). (2006). *Oxford American dictionary*: Oxford, UK: Oxford University Press.
- McLaren, L. (2009, April 18). What David Foot didn't tell us. *Globe and Mail*. Toronto, Ontario, Canada. p. L1.
- McMahon, M., Patton, W., & Tatham, P. (2003). *Managing life, learning and work in the 21st century: Issues informing the design of an Australian Blueprint for Career Development*. Subiaco, Western Australia, Australia: Miles Morgan Australia. Retrieved July 23, 2009, from [http://www.milesmorgan.com.au assets/ Downloads /Managing-Life-Learning-and-Work-in-the-21st-Century.pdf](http://www.milesmorgan.com.au/assets/Downloads/Managing-Life-Learning-and-Work-in-the-21st-Century.pdf)
- Meinhard, A., & Foster, M. (1999). *The impact of volunteer community service programs on students in Toronto's secondary schools*. Toronto, Ontario, Canada: Center for Voluntary Sector Studies.
- Middleton, C., Fireman, G., & DiBello, R. (1991, February). *Personality traits as strange attractors*. Paper presented at the inaugural meeting of the Society for Chaos Theory in Psychology, San Francisco, California.
- Middleton, E. B., & Loughhead, T. A. (1993). Parental influence on career development: An integrative framework for adolescent career counseling. *Journal of Career Development, 19*(3), 161-173.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: A sourcebook of new methods*. Beverly Hills, CA: Sage.
- Miller, M. J. (1995). A case for uncertainty in career counseling. *Counseling and Values, 39*(3), 162-168.

- Miller, V. M. (1999). The opportunity structure: Implications for career counseling. *Journal of Employment Counseling, 36*(1), 2-12.
- Miller-Tiedeman, A. (1988). Personal observations on life directions. *Journal of Counseling and Development, 66*, 487-488.
- Mills, J., Bonner, A., & Francis, K. (2008). The development of constructivist grounded theory. *International Journal of Qualitative Methods, 5*(1), 25-35.
- Ministerial Council for Employment, Education, Training, and Youth Affairs (2007). *Trialing, testing and refining the Australian Blueprint for Career Development*. Canberra, Australia: Author. Retrieved July 23, 2009, from <http://www.milesmorgan.com.au/assets/Downloads/Blueprint-Final-Report.pdf>
- Mirvis, P. H., & Hall, D. T. (1994). Psychological success and the boundaryless career. *Journal of Organizational Behavior, 15*(4), 365-380.
- Mitchell, K. E., Levin A.S, & Krumboltz, J.D. (1999). Planned happenstance: Constructing unexpected career opportunities. *Journal of Counseling and Development, 77*(2), 115-124.
- Mitchell, L. K., & Krumboltz, J. D. (1987). The effects of cognitive restructuring and decision-making training on career indecision. *Journal of Counseling and Development, 66*(4), 171-174.
- Mitchell, L. K., & Krumboltz, J. D. (1996). Krumboltz's learning theory of career choice and counseling. In D. Brown & L. Brooks (Eds.), *Career choice and development* (3rd ed., pp. 233-280). San Francisco: Jossey-Bass.

- Moen, P. (2009). Careers. In D. Carr (Ed.), *Encyclopedia of the life course and human development: Vol. 2. Adulthood* (pp. 37-40.). Detroit, MI: Macmillan Reference USA.
- Moen, P., & Roehling, P. (2005). *The career mystique: Cracks in the American dream*. Lanham, MA: Rowman & Littlefield.
- Montross, D.H., Kane, T.E. & Ginn, R.J. (2004). *Career coaching your kids* (2nd ed.). Palo Alto, California: Davies-Black.
- Morissette, R. (2002). Cumulative earnings among young workers. *Perspectives on Labour and Income, 14*, 33-40.
- Morrissey, M., Myers, D., Bélanger, P., Robitaille, M., Davison, P, Van Kleef, J, & Williams, R. (2008). *Achieving our potential: An action plan for prior learning assessment and recognition in Canada*. Halifax, Nova Scotia, Canada: PLA Centre. Retrieved March 12, 2010, from <http://www.ccl-cca.ca/pdfs/OtherReports/2008PLAR-FullReport-EN.pdf>
- Morrow, S. L. (2005). Quality and trustworthiness in qualitative research in counseling psychology. *Journal of Counseling Psychology, 52*(2), 250-260.
- Morse, J. M. (2007). Sampling in grounded theory. In A. B. Bryant & K. Charmaz (Eds.), *The Sage handbook of grounded theory* (pp. 229-244). Thousand Oaks, CA: Sage.
- Moses, B. (2003). Interview with Barbara Moses. *Contact Point, 7*(1). Retrieved March 15, 2010, from http://www.contactpoint.ca/index.php?option=com_content&view=category&id=57:summer-2003&Itemid=75&layout=default
- Myers, I. B. (1987). *Introduction to type: A description of the theory and applications of the Myers-Briggs Type Indicator*: Palo Alto, CA: Consulting Psychologists Press.

- Myles, J., Picot, G., & Wannell, T. (1993). Does post-industrialism matter? The Canadian experience. In G. Esping-Andersen (Ed.), *Changing classes: Stratification and mobility in post-industrial societies* (pp. 171-194). London: Sage.
- Neault, R. A. (2002, January). *Thriving in the new millennium: Career management in the changing world of work*. Paper presented at the NATCON Conference, Ottawa, Ontario, Canada.
- Nova Scotia Department of Education (2006). *Parents as career coaches: A facilitator's guide*. Halifax, Nova Scotia, Canada: Author.
- Nova Scotia Department of Education (2007a). *2006 follow-up survey of 1998 Nova Scotia high school graduates: Report on findings*. Halifax, Nova Scotia, Canada: Author.
- Nova Scotia Department of Education (2007b). *Comprehensive guidance and counselling*. Halifax, Nova Scotia, Canada: Author.
- Okiishi, R. W. (1987). The genogram as a tool in career counseling. *Journal of Counseling & Development*, 66(3), 139-143.
- Organisation for Economic Co-operation and Development (2000). *From initial education to working life: Making transitions work*. Paris: Author.
- Organisation for Economic Co-operation and Development (2002). *Career guidance policy review: Country note on Canada*. Paris: OECD. Retrieved March 28, 2010, from <http://www.oecd.org/dataoecd/9/41/1963039.pdf>
- Organisation for Economic Co-operation and Development (2004a). *Career guidance and public policy: Bridging the gap*. Paris: Author. Retrieved June 4, 2009, from <http://www.oecd.org/dataoecd/33/45/34050171.pdf>

- Organisation for Economic Co-operation and Development (2004b). *Career guidance: A handbook for policy makers*. Paris: Author. Retrieved June 10, 2009, from <http://www.oecd.org/dataoecd/53/53/34060761.pdf>
- Organisation for Economic Co-operation and Development (2008). *Tertiary education for the knowledge society: OECD thematic review of tertiary education: Synthesis report*. Paris: Author. Retrieved March 29, 2010, from http://oecd-conference-tekis.iscte.pt/downloads/OECD_overview.pdf
- Osipow, S. H., & Fitzgerald, L. F. (1996). *Theories of career development*. Needham Heights, MA: Allyn & Bacon.
- Palmer, S., & Cochran, L. (1988). Parents as agents of career development. *Journal of Counseling Psychology*, 35(1), 71-76.
- Parson, F. (1909). *Choosing a vocation*. Boston: Houghton Mifflin.
- Patton, M. Q. (2002). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.
- Patton, W.A., & McMahon, M. (1999). *Career development and systems theory: A new relationship*. Pacific Grove, CA: Brooks/Cole.
- Patton, W.A., & McMahon, M. (2006). *Career development and systems theory: Connecting theory and practice*. Rotterdam, Netherlands: Sense Publications.
- Patton, W.A., Bartrum, D., & Creed, P. (2004). Gender differences for optimism, self-esteem, expectations and goals in predicting career planning and exploration in adolescents. *International Journal for Educational and Vocational Guidance*, 4(2), 193-209.

- Peavy, R. V. (1993). Envisioning the future: Worklife and counselling. *Canadian Journal of Counselling, 27*(2), 28-40.
- Peavy, R. V. (1996). *Constructivist counselling: A participant's guide*. Victoria, British Columbia, Canada: University of Victoria.
- Peavy, R. V. (2001). *Under construction*. Toronto, Ontario, Canada: Career-life Skills Resources.
- Percy, I. (2000, May). *Putting the wind in your sails*. Workshop presented at the annual professional development conference for Holland College staff, Charlottetown, Prince Edward Island, Canada.
- Phillips, S. D. (1997). Toward an expanded definition of adaptive decision making. *Career Development Quarterly, 45*(3), 275-287.
- Pillay, G. (2004). The transition from high school to post-high-school life: View of the class of '88. In L. Andres & F. Finlay (Eds.), *Student affairs: Experiencing higher education* (pp. 217-243). Vancouver, British Columbia, Canada: University of British Columbia Press.
- Plsek, P. E., & Wilson, T. (2001). Complexity, leadership, and management in healthcare organisations. *British Medical Journal, 323*, 746-749.
- Poehnell, G., & Amundson, N. E. (2002). CareerCraft: Engaging with, energizing and empowering career creativity. In J. Alvarez, S. Svejenova, M. Peiperl, M. Arthur, R. Goffee & N. Anand (Eds.), *Career creativity: Explorations in the remaking of work* (pp. 105-122): Oxford: Oxford University Press.
- Poehnell, G., & Amundson, N. E. (2003). *Career crossroads*. Richmond, British Columbia, Canada: Ergon Communications.

- Poerksen, B. (2004). *The certainty of uncertainty: Dialogues introducing constructivism*. Charlottesville, VA: Imprint Academic.
- Pollock, G. (2008). Youth transitions: Debates over the social context of becoming an adult. *Sociology Compass*, 2(2), 467-484.
- Pryor, R. G. L., Amundson, N. E., & Bright, J. E. H. (2008). Probabilities and possibilities: The strategic counseling implications of the chaos theory of careers. *Career Development Quarterly*, 56(4), 309-318.
- Pryor, R. G. L., & Bright, J. E. H. (2003a). The chaos theory of careers. *Australian Journal of Career Development*, 12(2), 12-20.
- Pryor, R. G. L., & Bright, J. E. H. (2003b). Order and chaos. A twenty-first century formulation of careers. *Australian Journal of Psychology*, 55 (2), 121-128.
- Pryor, R. G. L., & Bright, J. E. H. (2005a). Chaos in practice: Techniques for career counsellors. *Australian Journal of Career Development*, 14(1), 18-28.
- Pryor, R. G. L., & Bright, J. E. H. (2005b). Luck readiness index manual. Sydney, Australia: Congruence/Bright and Associates.
- Pryor, R. G. L., & Bright, J. E. H. (2006). Counseling chaos: Techniques for practitioners. *Journal of Employment Counseling*, 43(1), 2-17.
- Pryor, R. G. L., & Bright, J. E. H. (2007). Applying chaos theory to careers: Attraction and attractors. *Journal of Vocational Behavior*, 71(3), 375-400.
- Pryor, R. G. L., & Bright, J. E. H. (2008). Archetypal narratives in career counselling: a chaos theory application. *International Journal for Educational and Vocational Guidance*, 8(2), 71-82.

- Quillian-Wolever, R. E., & Wolever, M. E. (2003). Stress management at work. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of occupational health psychology* (pp. 355-375). Washington, DC: American Psychological Association.
- Rainey, L. M., & Borders, L. D. (1997). Influential factors in career orientation and career aspiration of early adolescent girls. *Journal of Counseling Psychology, 44*(2), 160–172.
- Redekopp, D. E., Day, B., & Robb, M. (1995). The "High Five" of career development. In B. Hiebert (Ed.), *Exemplary career development programs and practices: The best from Canada*. Greensboro, NC: ERIC Clearinghouse on Counseling and Student Services
- Resnikoff, A. (1969). Vocational development theory: Some loose ends. *The Counseling Psychologist, 1*(1), 27-28.
- Reynolds, J., Stewart, M., MacDonald, 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.
- Richards, R. (1996). Does the lone genius ride again? Chaos, creativity, and community. *Journal of Humanistic Psychology, 36*(2), 44-60.
- Richardson, M. S. (1993). Work in people's lives: A location for counseling psychologists. *Journal of Counseling Psychology, 40*, 425-425.
- Riverin-Simard, D. (1998). *Work and Personality*. Montreal, Quebec, Canada: Meridien.
- Riverin-Simard, D. (1999). *Key roles in the revolution of work*. Ottawa, Ontario, Canada: Canadian Career Development Foundation.

- Riverin-Simard, D. (2000). Career development in a changing context of the second part of working life. In A. Collin & R. A. Young (Eds.), *The future of career* (pp. 115-129). Cambridge: Cambridge University Press.
- Robson C. (2002). *Real world research* (2nd ed.). Oxford: Blackwell.
- Rottinghaus, P. J., Coon, K. L., Gaffey, A. R., & Zytowski, D. G. (2007). Thirty-year stability and predictive validity of vocational interests. *Journal of Career Assessment, 15*(1), 5-22.
- Rudd, P., & Evans, K. (1998). Structure and agency in youth transitions: Student experiences of vocational further education. *Journal of Youth Studies, 1*(1), 39-62.
- Salomone, P. R. (1996). Tracing Super's theory of vocational development: A 40-year retrospective. *Journal of Career Development, 22*(3), 167-184.
- Salomone, P. R., & Mangicaro, L. L. (1991). Difficult cases in career counseling: IV-Floundering and occupational moratorium. *Career Development Quarterly, 39*(4), 325-336.
- Sanders, T. I. (1998). *Strategic thinking and the new science: Planning in the midst of chaos, complexity, and change*. New York: Free Press.
- Sardar, Z., & Abrams, I. (2004). *Introducing Chaos*. Cambridge, UK: Icon Books.
- Saunders, R. (2008). *Pathways for youth to the labour market: A synthesis report*. Pathways to the labour market series – No. 9. Ottawa, Ontario, Canada: Canadian Policy Research Networks. Retrieved July 23, 2009, from http://www.cprn.org/documents/50456_EN.pdf

- Savickas, M. L. (1993). Career counseling in the postmodern era. *Journal of Cognitive Psychotherapy*, 7(3), 205-215.
- Savickas, M. L. (1997). Career adaptability: An integrative construct for life-space, life-span theory. *Career Development Quarterly*, 45(3), 247-259.
- Savickas, M. L. (1999). The transition from school to work: A developmental perspective. *Career Development Quarterly*, 47(4), 326-336.
- Savickas, M. L. (2000). Renovating the psychology of career for the twenty-first century. In A. Collins & R. A. Young (Eds.), *The future of career* (pp. 53-68). Cambridge, UK: Cambridge University Press.
- Savickas, M. L., & Spokane, A. R. (1999). Introduction: Reconsidering the nature, measurement, and uses of vocational interests. In M. L. Savickas & A. R. Spokane (Eds.), *Vocational interests: Their meaning, measurement, and use in counseling* (pp. 1-13). Palo Alto, CA: Davies-Black.
- Savickas, M. L., & Walsh, W. B. (Eds.) (1996). *Handbook of career counseling theory and practice*. Palo Alto, CA: Davies-Black.
- Scheck, C. L., Kinicki, A. J., & Davy, J. A. (1997). Testing the mediating processes between work stressors and subjective well-being. *Journal of Vocational Behavior*, 50(1), 96-123.
- Schneider, B. L., & Stevenson, D. (1999). *The ambitious generation: America's teenagers, motivated but directionless*. New Haven, CT: Yale University Press.

- Schoon, I., Ross, A., & Martin, P. (2009). Sequences, patterns, and variations in the assumption of work and family-related roles: Evidence from two British birth cohorts. In I. Schoon & R.K. Silbereisen (Eds.), *Transitions from school to work: Globalization, individualization, and patterns of diversity* (pp.219-242). Cambridge, UK: Cambridge University Press.
- Schoon, I., & Silbereisen, R.K (2009). Conceptualising school-to-work transitions in context. In I. Schoon & R.K. Silbereisen (Eds.), *Transitions from school to work: Globalization, individualization, and patterns of diversity* (pp.3-29). Cambridge, UK: Cambridge University Press.
- Schor, J. (2003). The (ever more) overworked American. In J. DeGraff (Ed.). *Take back your time: Fighting overwork and time poverty in America* (pp. 6-11). San Francisco, CA: Berrett-Koehler.
- Schwandt, T. A. (2000). Three epistemological stances for qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 189-213). Thousand Oaks, CA: Sage.
- Schwandt, T. A. (2001). *Qualitative inquiry: A dictionary of terms* (2nd ed.). Thousand Oaks, CA: Sage.
- Schwartz, B. (2004). *The paradox of choice: Why more is less*. New York: Harper Collins.
- Schwartz, S. J., Côté, J. E., & Arnett, J. J. (2005). Identity and agency in emerging adulthood: Two developmental routes in the individualization process. *Youth & Society*, 37(2), 201-229.
- Sebold, H. (1989). Adolescents' peer orientation: Changes in the support system during the past three decades. *Adolescence*, 24, 937-946.

- Shaienks, D., & Gluszynski, T. (2007). *Participation in postsecondary education graduates, continuers and drop outs: Results from YITS cycle 4*. Ottawa, Ontario, Canada: Ministry of Industry. Retrieved July 25, 2009, from <http://www.statcan.gc.ca/pun/81-595-m/81-595-m2007059-eng.pdf>
- Shanahan, M. J., Hofer, S. M., & Miech, R. A. (2003). Planful competence, the life course, and aging: Retrospect and prospect. In S. Zarit, L. Pearlin & K. Schaie (Eds.), *Personal control in social and life course contexts* (pp. 189-211). New York: Springer.
- Sharf, R. S. (2009). *Applying career development theory to counseling* (5th ed.). Pacific Grove, CA: Brooks/Cole.
- Shepard, B., & Shoop, E. (2003, January). *A new twist: Fostering creative career exploration in young people*. Paper presented at the NATCON Conference: Ottawa, Ontario, Canada.
- Sher, B. (1979). *Wishcraft: How to get what you really want*. New York: Ballantine.
- Smart, R., & Peterson, C. (1997). Super's career stages and the decision to change careers. *Journal of Vocational Behavior*, 51(3), 358-374.
- Smith, L., & Jones-Devitt, S. (2007). Chaos and complexity theory. In S. Jones-Devitt & L. Smith (Eds.), *Critical thinking in health and social care* (pp. 117-129). London: Sage.
- Sorensen, M. (2002). *The 'Class of 2000': Two years after graduation*. Edmonton, Alberta, Canada: Alberta Learning.

- Starks, H., & Brown Trinidad, S. (2007). Choose your method: A comparison of phenomenology, discourse analysis, and grounded theory. *Qualitative Health Research, 17*(10), 1372 -1380.
- Statistics Canada (2004). *National graduates' survey: Student debt*. Retrieved January 1, 2005, from <http://www.statcan.ca/Daily/English/040426/d040426a.htm>
- Stern, P. N. (2007). On solid ground: Essential properties for growing grounded theory. In A. B. Bryant & K. Charmaz (Eds.), *Sage handbook of grounded theory* (pp. 114-126). Thousand Oaks, CA: Sage.
- Stewart, I. (1989). *Does God play dice?* Cambridge, MA: Blackwell.
- Stokes, H., & Wyn, J. (2007). Constructing identities and making careers: Young people's perspectives on work and learning. *International Journal of Lifelong Education, 26*(5), 495-511.
- Strauber, B., & Walther, A. (2006). De-standardised pathways to adulthood: European perspectives on informal learning in informal networks. *Sociology Review, 79*, 241–262.
- Strauss, A. (1987). *Qualitative analysis for social scientists*. Cambridge, UK: Cambridge University Press.
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage.
- Strauss, A., & Corbin, J. (1994). Grounded theory methodology: An overview. In N.K. Denzin and Y.S. Lincoln (Eds.), *Sage handbook of qualitative research* (pp. 273-285). Thousand Oaks, CA: Sage.

- Strauss, A. L., & Corbin, J. M. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks, CA: Sage.
- Strong, E. K., Hansen, J. C., & Campbell, D. P. (1994). *Strong Interest Inventory*: Palo Alto, CA: Consulting Psychologists Press.
- Sultana, R. G. (2003). *Review of career guidance policies in 11 acceding and candidate countries: A synthesis report*. Turin: European Training Foundation.
- Super, D. E. (1953). A theory of vocational development. *American Psychologist*, 8(1), 185-190.
- Super, D. E. (1957). *The psychology of careers*: New York: Harper & Row.
- Super, D. E. (1980). A life-span, life-space approach to career development. *Journal of Vocational Behavior*, 16(3), 282-298.
- Super, D. E. (1981). A developmental theory: Implementing a self-concept. In D. H. Montross & C. J. Shinkman (Eds.), *Career development in the 1980s: Theory and practice* (pp. 28-42). Springfield, IL: Thomas.
- Super, D. E. (1984). Career and life development. In D. Brown & L. Brooks (Eds.), *Career choice and development* (pp. 192-234). San Francisco: Jossey Bass.
- Super, D. E. (1990). A life span, life-space approach to career development. In D. B. L. Brooks (Ed.), *Career choice and development* (2nd ed., pp. 197-261). San Francisco: Jossey-Bass.
- Super, D. E. (1992). Toward a comprehensive theory of career development. In D. H. Montross & C. J. Shinkman (Eds.), *Career development: Theory and practice* (pp. 35-64). Springfield, IL: Thomas.

- Super, D. E., Thompson, A. S., Lindeman, R. H., Myers, R. A., & Jordaan, J. P. (1988). *Adult career concerns inventory: Manual for research and exploratory use in counseling*. Palo Alto, CA: Consulting Psychologists Press.
- Team Canada (2000) Career development in Canada: A changing landscape. In B. Hiebert & L. Bezanson (Eds.), *Making Waves: Career development and public policy* (pp.98-118). Ottawa, Ontario, Canada: Canadian Career Development Foundation. Retrieved August 8, 2009, from http://ccdf.ca/ccdf2/making_waves/making_waves.html
- Thiessen, V., & Looker, E. D. (1999). *Investing in youth: The Nova Scotia school-to-work transition project*. Ottawa, Ontario, Canada: Human Resources Development Canada.
- Thorngren, J. & Feit, S. (2001). The career-o-gram: A postmodern career intervention. *Career Development Quarterly*, 49, 291-303.
- Tiedeman, D. V., & O'Hara, R. P. (1963). *Career development: Choice and adjustment*. New York: College Entrance Examination Board.
- Timmermans, S. & Tavory, I. (2007). Advancing ethnographic research through grounded theory practice. In A. Bryant and K. Charmaz (Eds.), *Sage handbook of grounded theory* (pp. 493-512). Thousand Oaks, CA: Sage.
- Tom, M. & Tom, J. (1998) *True work: Doing what you love and loving what you do*. New York: Random House.
- Ungar, M. (2001). Constructing narratives of resilience with high-risk youth. *Journal of Systemic Therapies*, 20(2), 58-73.

- Ungar, M. (2004). *Nurturing hidden resilience in troubled youth*. Toronto, Ontario, Canada: University of Toronto Press.
- United Nations (2007). *World youth report 2007: Young people in transition to adulthood: Progress and Challenges*. New York: Author. Retrieved April 1, 2010, from http://www.un.org/esa/socdev/unyin/documents/wyr07_preliminary.pdf
- Urquhart, C., & Fernández, W. (2006, December). Grounded theory method: The researcher as blank slate and other myths. Paper presented at the International Conference on Information Systems, Milwaukee, WI. Retrieved on December 1, 2010, from <http://aisel.aisnet.org/icis2006/31>
- Vaughan, K. (2003, August). *Changing lanes: Young people making sense of pathways*. Paper presented at the New Zealand Council for Educational Research's Annual Conference, "Educating for the 21st century." Wellington, New Zealand. Retrieved October, 23, 2008, from <http://www.nzcer.org.nz/pdfs/12223.pdf>
- Vaughan, K. (2004). Beyond the age of aquarius: Reframing alternative education. Wellington: New Zealand Council for Educational Research.
- Vaughan, K. (2005). The pathways framework meets consumer culture: Young people, careers, and commitment. *Journal of Youth Studies*, 8(2), 173-186.
- Vaughan, K., & Boyd, S. (2005). Pathways, junctions and pitstops: Transition policy in New Zealand. In N. Bagnall (Ed.), *Youth transition in a globalized marketplace* (pp. 99-118). New York: Nova Science.
- Vaughan, K., & Roberts, J. (2007). Developing a 'productive' account of young people's transition perspectives. *Journal of Education and Work*, 20(2), 91-105.

- Vaughan, K., Roberts, J., & Gardiner, B. (2006). *Young people producing careers and identities. The first report from the Pathways and Prospects project*. Wellington, New Zealand: New Zealand Council for Educational Research. Retrieved October 1, 2008, from http://www.nzcer.org.nz/default.php?products_id=1700
- Vignoli, E., Croity-Belz, S., Chapeland, V., de Phillipis, A., & Garcia, M. (2005). Career exploration in adolescents: The role of anxiety, attachment, and parenting style. *Journal of Vocational Behavior, 67*(2), 153-168.
- von Glasersfeld, E. (1995). *Radical constructivism: A way of knowing and learning*. London: Falmer.
- Waldrop, M. M. (1992). *Complexity: The emerging science at the edge of chaos*. New York: Simon & Schuster.
- Warren, K., Franklin, C., & Streeter, C. L. (1998). New directions in systems theory: Chaos and complexity. *Social Work, 43*(4), 357-372.
- Waterman, R., Waterman, J., & Collard, B. A. (1994). Towards a career-resilient workforce. *Harvard Business Review, 72*(4), 87-95.
- Watson, M., & McMahon, M. (2006). My system of career influences: Responding to challenges facing career education. *International Journal for Educational and Vocational Guidance, 6*(3), 159-166.
- Watts, A. G. (2005). Career guidance policy: An international review. *Career Development Quarterly, 54*(1), 66-76.
- Watts, A. G. (2008). Career guidance and public policy. In J. A. Athanasou & R. Van Esbroeck (Eds.), *International handbook of career guidance* (pp. 341-353). Secaucus, NJ: Springer.

- Watts, A. G., & Fretwell, D. (2004). *Public policies for career development: Policy strategies for designing career information and guidance systems in middle-income and transition economies*. Washington, DC: World Bank.
- Watts, A. G., Hawthorn, R., Hoffbrand, J., Jackson, H., & Spurling, A. (1997). Developing local lifelong guidance strategies. *British Journal of Guidance and Counselling*, 25(2), 217–227.
- Watts, A. G., & Sultana, R. G. (2004). Career guidance policies in 37 countries: Contrasts and common themes. *International Journal for Educational and Vocational Guidance*, 4(2), 105-122.
- Werner, E. E., & Smith, R. S. (2001). *Journeys from childhood to midlife: Risk, resilience, and recovery*. London: Cornell University Press.
- Wheatley, M. J. (1999). *Leadership and the new science: Discovering order in a chaotic world*. San Francisco: Berrett-Koehler.
- Wiesner, M., Vondracek, F., Capaldi, D., & Porfeli, E. (2003). Childhood and adolescent predictors of early adult career pathways. *Journal of Vocational Behavior*, 63(3), 305-328.
- Wijers, G. A., & Meijers, F. (1996). Careers guidance in the knowledge society. *British Journal of Guidance & Counselling*, 24(2), 185-198.
- Williams, G. P. (1997). *Chaos theory tamed*. Washington, D.C.: Joseph Henry Press.
- Wiseman, R. (2003). *The luck factor: Change your luck and change your life*: New York: Hyperion.

- Witko, K., Bernes, K. B., Magnusson, K., & Bardick, A. D. (2005). Senior high school career planning: What students want. *Journal of Educational Enquiry*, 6(1), 34–49.
- Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. (1997). Jobs, careers, and callings: People's relations to their work. *Journal of Research in Personality*, 31(1), 21-33.
- Wuest, J. & Merritt-Gray, M. (2001) Feminist grounded theory revisited: Practical issues and new understandings. In R. Schreiber and P.N. Stern (Eds.), *Using grounded theory in nursing* (pp. 159–176). New York: Springer.
- Wyn, J. (2005). Youth, risk and education. In S. Richardson & M. Prior (Eds.), *No time to lose: The well-being of Australia's children* (pp. 255-280). Melbourne, Victoria, Australia: Melbourne University Publishing.
- Wyn, J., & Dwyer, P. (2000). New patterns of youth transition in education. *International Social Science Journal*, 164, 147-159.
- Young, J. B., & Rodgers, R. F. (1997). A model of radical career change in the context of psychosocial development. *Journal of Career Assessment*, 5(2), 167-182.
- Young, R. A., & Friesen, J. D. (1992). The intentions of parents in influencing the career development of their children. *Career Development Quarterly*, 40(3), 198-207.
- Young, R. A., Valach, L., & Collin, A. (2002). A contextualist explanation of career. In D. Brown (Ed.), *Career choice and development* (4th ed., pp. 206-252). San Francisco: Jossey-Bass.
- Zimmerman, J. H. (1989). Determinism, science, and social work. *The Social Service Review*, 63(1), 52-62.