SUBJECTIVE UNDEREMPLOYMENT

“This job is beneath me”: Subjective underemployment, person-job fit, and the role of proactive
career behaviours

by

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Abstract

Bachelor degree acquisition is increasingly common, with many enrolling in university programs in hopes of providing a stable financial foundation for later life. However, new university graduates are greatly outpacing careers which mandate a university education, resulting in many of them occupying positions lesser than their expectations, and/or positions which do not mandate a university degree. A sample of 500 Amazon Mechanical Turk workers completed a battery of previously validated scales, and self-reported subjective underemployment / perceived overqualification was examined alongside several personal, and organizational outcomes of interest. Collectively, subjective underemployment and perceived overqualification accounted for significant portions of the variance in three personal outcomes (self-esteem, well-being, and life satisfaction). Higher levels of underemployment and overqualification were associated with poorer personal (e.g., lower self-esteem) and organizational (e.g., fewer organizational citizenship behaviours) outcomes. Subjective underemployment and perceived overqualification were also associated with lower levels of affective organizational commitment and stronger turnover intentions. Together, the findings suggest that employers may greatly benefit from minimizing perceptions of underemployment or overqualification among their personnel.

Keywords: Underemployment, overqualification, turnover intention, affective commitment

“This job is beneath me”: Subjective underemployment, person-job fit, and the role of proactive career behaviours

Over the course of the past several decades there have been substantial changes in how employers and employees think about and experience employment. This is especially true for those just starting out in the workforce. There is no doubt that the terms of the workplace psychological contract have been changing (Cooper, 2002; Nelson & Kristian, 2017). The traditionally strict hierarchical structure in which ascent is gained through long-standing employment and loyalty to a single organization is quickly becoming a thing of the past (Kubheka, Kholopane, & Mbohwa, 2013). According to some sources, recent university graduates will cycle through three different positions in their first five years post-graduation – nearly twice as many jobs compared to those graduating twenty years earlier (LinkedIn, 2018). In addition to change and instability, the early career experience for many university graduates is often marked by periods of unemployment, and underemployment. Perhaps not surprisingly, the experience of unemployment and its associated outcomes has received a great deal more research attention than the concept of underemployment (Paul & Moser, 2009). But underemployment is becoming increasingly more common (Bell & Blanchflower, 2018). The need to understand what this experience is like, including the implications for those who live it, is becoming more important from both a psychological and an organizational perspective. The purpose of the present research was to examine the experience of underemployment among recent graduates, particularly as it relates to personal, psychological outcomes and to organizational outcomes more broadly.

Unemployment: Correlates and Associated Outcomes

There is an extensive body of literature documenting a number of physical and psychological correlates of being out of work (Paul & Moser, 2009; Pharr, Moonie, & Bungum, 2012). Being involuntarily unemployed (such as when between jobs) can result in a myriad of undesirable personal psychological outcomes related to self-esteem, general well-being and life satisfaction (Chen & Hou, 2018; Jehoel-Gisbers, & Groot, 1989). A meta-analysis by Paul and Moser (2009) found that, compared to their working peers, unemployed individuals were over twice as likely to experience depression and anxiety, and were significantly more likely to report low levels of subjective well-being and self-esteem (Mean $d = .51$). Unemployment can also be detrimental to physical health, with those who are unemployed being more likely to visit the doctor, or take prescription medications (Reeves, McKee, Stuckler, 2015; Linn, Sandifer, & Stein, 1985; Stuckler, & Huijts, 2014). Some studies have shown these effects to be particularly pronounced among youth and recent university graduates, in which bouts of unemployment tend to be notably longer (Spreen, 2013).

Defining Underemployment

Closely related to unemployment is *underemployment* – a concept used to describe a situation in which an individual has a job, but is not employed to their fullest potential. A person might be underemployed because they are working part-time rather than full-time, because they are working on a contract rather than occupying a permanent position, or even because they hold degrees or qualifications not mandated by their current position (Feldman, 1996). Over the course of the past several decades, underemployment has been measured in a variety of ways, and pursuing any single measurement choice may yield prevalence estimates much different than other measurement choices. Each method relies on the underlying notion that an underemployed

individual is not employed to their fullest potential, and that this comparison is made to a referent group or a set standard. Prior to Feldman's (1996) seminal work which created a higher-order underemployment construct comprised of previous scholars' measures of underemployment, what precisely constituted the "under" aspect of underemployment tended to differ widely by field of academic study.

Among early economists studying underemployment, measures of wages, and wage deprivation (i.e., upon re-employment after lay-offs) tended to be the main focus of research. Economists were primarily concerned with assessing the *prevalence* of underemployment, and did not focus much on the potential antecedents or outcomes associated with underemployment. Accordingly, underemployment versus suitable employment was seen as a dichotomous outcome characterized by earning lesser wages in comparison to a previous job (Elder, 1974; Zvonkovic, 1988), employment *uncertainty* as when an individual who previously held a steady job is now working intermittently (Tipps & Gordon, 1985), as well as over-education (Clogg and Shockey, 1984). The dichotomous nature in which underemployment was measured made it easy for economists to compile prevalence estimates, but failed to adequately capture many of the subjective aspects of the underemployment experience.

Sociologists and organizational behaviour researchers tended to use some of the same methods as economists to measure underemployment (educational level versus what is required, lesser wages than previous job), but they also paid more attention to the subjective experience and related outcomes of underemployment. Under this framework, underemployment was conceptualized as a spectrum, in which the magnitude of underemployment depends on an individual's subjective experiences. Each body of literature uniquely contributed to the measurement of underemployment, however prior to Feldman (1996) there was no empirical

article which combined interdisciplinary measures of underemployment into one collective and more holistic conceptualization. Indeed, Feldman's (1996) primary research goal was to, "present a new conceptualization of underemployment which integrates previous definitions of labor economists, sociologists, and psychologists" (p.386). Feldman's (1996) conceptualization of underemployment has seen little revision over the course of the past several decades, and continues to be used by researchers today. Through his synthesis of the literature, Feldman (1996) set out five key aspects of underemployment, any one of which may categorize an individual as underemployed: "1) Person possesses more formal education than the job requires, 2) Person is involuntarily employed in a field outside their area of formal education, 3) Person possesses higher-level work skills and more extensive work experience than the job requires, 4) Person is involuntarily engaged in part-time, temporary, or intermittent employment, or 5) Person is earning wages 20% or less than in the previous job (for new graduates, wages 20% or less than average of graduating cohort in same major or occupational track)" (Feldman, 1996, p. 338).

Indeed, the only existent, and recent, quantitative measure of subjective underemployment is based upon Feldman's (1996) five key principles (Allan, Tay, & Sterling, 2017), and includes a sixth factor, poverty wage employment, which touches on individuals who, despite being employed in some capacity, remain beneath the United States poverty line. Unfortunately, the scale was intentionally developed not to account for an important part of underemployment, perceived overqualification. Allan, et al., (2017, p.96) state "while overqualification is also a dimension of underemployment, several well-established scales are already available...., Therefore we aim to examine the six created scales with respect to the overqualification scale rather than redeveloping a measure of overqualification."

Perceived overqualification is a particularly important construct to assess among recent graduates, as they are certain to possess educational qualifications, and may appraise their underemployment experiences in light of the qualifications they possess. In order to more holistically assess underemployment and adequately measure each of Feldman's (1996) key principles of underemployment, Maynard, Joseph, and Maynard's (2006) perceived overqualification scale was also used in the present research. Maynard et al.'s (2006) measure does not solely focus on a simple credentials required/credentials obtained mismatch, but rather focuses on the employee's *perceptions* of their own overqualification, similar to the concept of subjective underemployment (Allan, Tay & Sterling, 2017).

Prevalence of Underemployment & Overqualification

Recent labour market statistics suggest that a number of Canadian university graduates may be experiencing underemployment (Statistics Canada, 2015). When disaggregating bachelor's degrees by field of study (humanities, behavioural sciences, education, architectures, engineering, and health), it was found that one-third of humanities graduates, and one quarter of behavioural-science graduates were employed in positions requiring only a high school degree (Statistics Canada, 2015). While those studying "harder" sciences such as architecture, engineering, or health-related fields tended to fare slightly better, humanities and social sciences degrees have seen much greater interest over the course of the past decade, and are the most popular awarded today (Statistics Canada, 2015). Other recent Canadian research has shown that roughly 40% of university graduates aged 25 to 34 occupy positions that require a college degree or less (Parliamentary Budget Office of Ontario, 2015; Uppal & LaRochelle-Cote, 2014).

Prolonged bouts of underemployment among recent university graduates may be particularly devastating, as bachelor degree acquisition has long been touted as a ticket to stable

and adequate employment (Vuolo, Mortimner & Staff, 2016). Indeed, Kalleberg (2011) notes that the millennial generation is more educated than their parents, but are frustrated by bleak job prospects in an “increasingly polarized labor market” (Kalleberg, 2011, p.3; Milkman, 2016). Technological advances have lessened the need for middle-skilled labour, and in turn, the job market is becoming increasingly dichotomized between entry-level positions, and positions requiring advanced cognitive skills (Valleta, 2015).

Little is known about the experience of subjective underemployment, the factors which may influence underemployment perceptions, and the associated outcomes of underemployment. Moreover, it is a difficult construct to assess given that it is influenced by the economic cycle, conceptualized in many ways, and includes a subjective component. Nonetheless, Canadian government agencies state the prevalence of underemployment continues to reside at high levels with little signs of improvement over the course of the past several decades (Parliamentary Budget Office of Ontario, 2015). Notably, Canadians are more likely to be underemployed than the vast majority of Organisation for Economic Cooperation (OECD) countries (OECD, 2012). These findings are discussed in a more applied sense among popular media sources, with headlines discussing the necessity of “The millennial side hustle”, mentioning that “Parents’ Basements are ‘Getting Crowded’”, and more bleakly, “Youth underemployment at four-decade peak” (Grattan, 2017; Purdon & Palleja, 2017; Tencer, 2016). As underemployment perceptions are often related to perceived overqualification (possessing degrees, experience, etc. not mandated by a position held), this has left many young Canadians questioning the utility of post-secondary degree acquisition, and a stronger focus on whether there will be jobs for young people upon graduation.

Subjective Underemployment and Person-Job Fit: A Theoretical Framework

Whereas economists place a strong emphasis on the measurement of underemployment, psychologists and sociologists are also interested in using theory to explore how or why subjective underemployment tends to result in a myriad of negative outcomes. Although a variety of theoretical frameworks have been applied when studying underemployment, including person-job fit (Bolino & Feldman, 2000), human capital theory (Büchel, 2001), and relative-deprivation theory (Erdogam & Bauer, 2009), the present study is guided by person-job fit. Using the person-job fit (P-J fit) model as a framework, perceived underemployment and overqualification reflect special forms of P-J mismatch which occurs when an employee feels that there is an incongruence between themselves and the job they occupy. Edwards (1991) outlined two forms of person-job mismatch in relation to overqualification, job demands-worker abilities fit, where an employee may perceive a mismatch between the educational credentials or KSAs they possess in comparison to what a position requires, as well as worker needs-job supplies fit, “the extent to which the goals, values, or desires of the employee are satisfied by the qualities of the job” (Maynard, Joseph & Maynard, 2006, p.510). Perceptions of overqualification, excessive experience, or boredom due to lack of difficulty at work are examples of job demands-worker abilities mismatch, whereas other aspects of underemployment such as lacking hours, low job security (temp, or contract work), or working outside of one’s field, are examples of worker needs-job supplies mismatch. When an employee perceives an incongruence of this nature, negative personal and organizational outcomes may arise due to frustration, perceptions of unfairness, or lesser motivation.

Taking into account the fact that many recent university graduates work outside of their field of major, coupled with perceptions of overqualification, many may justly perceive a strong

mismatch between the positions they occupy, in comparison to the positions they've trained for and feel they ought to occupy (Parliamentary Budget Office of Ontario, 2015). Incongruences of this nature are often conceptualized through person-job mismatch, which has been associated with undesirable organizational outcomes such as lesser employee organizational attachment and involvement, as well as higher employee turnover intentions (Boon & Biron, 2016; Tyagi & Gupta, 2005).

Similar outcomes are posited to occur when there is an incongruence between an employee and the organization they occupy (P-O fit). This is often assessed through relative comparison to an organization's values, goals, and priorities (Erdogan, Karaeminogullari, Bauer, & Ellis, 2017; O'Reilly, Chatman, & Caldwell, 1991). Although person-organization fit is almost exclusively used to qualify observed relationships and act as the theoretical underpinning between underemployment and outcome variables, research by Erdogan, et al. (2017) objectively measured person-organization fit and found it to protect against several negative effects of perceived overqualification. Specifically, perceptions of overqualification only resulted in fewer organizational citizenship behaviours when an employee perceived a strong mismatch between themselves and their organization. This may suggest that employees are willing to accept underemployment to a greater extent, so long as they believe in the organization they are working for.

Despite the widespread use of person-job fit when explaining relations between underemployment/overqualification on personal/organizational outcomes, it is often criticized as it fails to explain why an employee may perceive a mismatch in the absence of one. Indeed, an employee may be suitably employed in a position which matches their credentials and experience, yet nonetheless perceive themselves to be overqualified or underemployed. This is

particularly likely to occur when individuals appraise their underemployment through comparison to a chosen referent group, such as theorized within relative deprivation theory.

Relative deprivation theory suggests that the objective situations people find themselves in rarely guide their behaviours and feelings (Erdogan & Bauer, 2009). Instead, an individual's subjective evaluation of their circumstances and environment guide their behaviours, leading individuals to behave differently in identical circumstances. More specifically, relative deprivation theory suggests that when there is an incongruence between what an individual feels entitled to, in comparison to what they actually possess, frustration and negative outcomes often arise (Bolino & Feldman, 2000). Perceptions of entitlement or what is deserved are made through comparisons to one's chosen referent group, often peers. The stronger the degree of entitlement, the stronger the incongruence between one's present situation and ideals, and the stronger the likelihood of negative outcomes. In relation to perceptions of underemployment in the workplace, relative deprivation theory suggests that when one perceives they're entitled to greater status, higher pay, or similar, negative outcomes or frustration may arise. The greater this discrepancy is (for example, an entry-level worker who feels suitable to be CEO), the greater the likelihood of negative outcomes occurring. Past research investigating underemployment through this framework has found that an individual's perceptions of relative deprivation are related to their satisfaction with pay (Feldman, Leana, & Bolino, 2002).

Nonetheless, person-job fit theory remains the dominant theory used to explain relations involving underemployment and overqualification, and is particularly useful among a sample which may have many underemployed individuals in participant's referent groups. Indeed, many recent graduates may be underemployed due to occupying positions outside of their field of major, or positions which do not require a degree, however if this is the norm among their peers

and chosen referent groups, relative deprivation theory would likely fail to explain why many recent graduates feel underemployed. Similarly, if an employee and the entirety of their chosen referent group are all engaging in unchallenging, mundane tasks, a given employee may not feel relatively or comparatively deprived, but may still be internalizing the negative effects of underemployment.

Personal Outcomes of Subjective Underemployment and Overqualification

The majority of the literature examining underemployment's influence on health has examined mental health outcomes such as stress, well-being, and life satisfaction (George, Chaze, Fuller-Thomson, & Brennenstuhl, 2012; Kamerade & Richardson, 2018). Jones-Johnson and Johnson (1992), found significant positive relations between underemployment and five variables associated with workplace stress: "psychosomatic stress, depression, frustration, hostility, and insecurity" (Jones-Johnson, et al., 1992, p. 14). Interestingly, the roles of supervisor support and social support were not found to moderate any of the relations between subjective underemployment and the five stress variables, suggesting underemployment's relation to stress variables may be particularly robust (Jones-Johnson et al., 1992). Research has also shown that overqualification perceptions are related to lesser psychological well-being, and negative affectivity (Harari, Manapragada, & Viswesvaran, 2017). Individuals who occupy lower positions than their educational attainment would suggest are significantly more likely to report having chronic diseases in comparison to those deemed adequately employed (Friedland, & Price, 2003), and these individuals are also more likely to say that their health negatively interferes with their day-to-day lives (Friedland, et al., 2003).

A plethora of research has linked *unemployment* to negative health behaviours such as a greater likelihood to drink heavily, having a drinking problem, smoking tobacco, being

overweight, and physical inactivity, suggesting that unemployment exerts a negative influence on the physical and mental health of Canadians (Macassa, et al., 2014; Montgomery, Cook, Bartley, & Wadsworth, 1998). Due the conceptual similarities between un-, and under-employment as they relate to health outcomes (they both entail stress, uncertainty, concern, social stigma, and feelings of shame or embarrassment), it is likely that underemployment is also associated with poorer physical health and health behaviours. Indeed, relations between underemployment and mental health outcomes have been routinely found (Maddocks, Avison, & Wilson, 2012; Milner, Witt, LaMontagne, & Niedhammer, 2017).

Due to the routinely noted negative mental and physical health effects of un- and underemployment, it is hypothesized that:

H_{1A}: Subjective underemployment will be negatively associated with self-esteem, well-being, and life satisfaction among recent graduates

H_{1B}: Perceived overqualification will be negatively associated with self-esteem, well-being, and life satisfaction among recent graduates

Organizational Outcomes of Subjective Underemployment and Overqualification

From an organizational point of view, the study of subjective underemployment provides a unique opportunity to examine some of the ways in which the underemployment experience can influence key organizational outcomes. Indeed, by definition, the underemployed are employed. They are working in organizations and potentially exerting an influence on others within the organization and the work environment. A better understanding of these dynamics may well have important implications for organizations, as well as for individuals. In addition to the expected relationships with personal life outcomes, Feldman & and Turnley (1995) found

that underemployed recent graduates also reported lower ratings of key organizational outcomes such as job satisfaction, work commitment, job involvement, and internal work motivation.

Other research suggests that individuals who are perceived to be underemployed are treated differently by employers, which can significantly impact their opportunities for future success. For instance, one clever study used a resume-randomizer program to create fake resumes of recent college graduates to include either (a) bouts of unemployment, (b) bouts of underemployment, or (c) underemployment followed by unemployment (Nunley, Pugh & Romero, 2016). The resumes were submitted to a range of organizations and the researchers examined how underemployment influenced employers' perceptions of potential employees. Whereas gaps in employment did not result in lower call-back rates, the underemployed were 30% less likely to receive a call-back compared to all other groups. Moreover, those listed as currently underemployed were less likely to receive a call-back than those who had been underemployed in the past, but were currently unemployed. These findings suggest that not only can underemployment exert a negative influence on personal and organizational outcomes, but that being underemployed may have a negative impact on an individual's future success, and may partially "trap" them in an underemployed position, perhaps by unduly conveying a contentedness with mediocrity.

Furthermore, underemployment perceptions can increase turnover intention and negatively influence career trajectories, and managers may be reluctant to hire candidates who may be at risk of becoming underemployed (Erdogan & Bauer 2011; Maynard, Joseph, & Maynard, 2006). D'Ambrosio, Clark, and Barazzetta (2017) found that one particular aspect of underemployment increased turnover intention -- dissatisfaction with pay. Not surprisingly, when employees perceive a lack of person-job fit when it comes to compensation, they tend to

look for work elsewhere. There may still be other aspects of fit (or lack thereof) among the underemployed that would also contribute to turnover intentions as well as other negative organizational outcomes.

Perceived overqualification has also been conceptualized as a mismatch within a person-job fit framework, and has been examined alongside a number of organizational outcomes (Jansen & Kristof-Brown, 2006; Wassermann, Fujishiro, & Hoppe, 2017). Indeed, a recent meta-analysis examining 61 studies found that perceptions of overqualification were negatively related to job satisfaction, organizational commitment, and organizational behaviour, and positively related to turnover intentions and job search behaviours (Harari, Manapragada, & Viswesvaran, 2017). In addition, perceived overqualification has been found to be significantly negatively related to affective organizational commitment (Zheng & Wang, 2017).

Previous research investigating why perceptions of underemployment may influence organizational outcomes have examined employee's perceptions of their person-job fit. Person-job fit has been found to be positively correlated with several desirable organizational outcomes including organizational commitment and job satisfaction, and negatively associated with turnover intention (Abdalla, Elsetouhi, Negm, & Abdou, 2018; Lauver & Kristof-Brown, 2001). In order to determine whether subjective underemployment and perceived overqualification exert an influence within organizations, we sought to determine how these constructs relate to some of the most frequently studied organizational outcomes. Two positive organizational outcomes (organizational citizenship behaviours, and affective organizational commitment), as well as two negative organizational outcomes (counterproductive workplace behaviours, and turnover intention) were selected to examine the potential multi-directionality of underemployment's influence.

H_{2A}: Subjective underemployment will be negatively associated with organizational citizenship behaviours and affective organizational commitment.

H_{2B}: Perceived overqualification will be negatively associated with organizational citizenship behaviours and affective organizational commitment.

H_{3A}: Subjective underemployment will be positively associated with counterproductive workplace behaviours and turnover intentions

H_{3B}: Perceived overqualification will be positively associated with counterproductive workplace behaviours and turnover intentions

Proactive Career Behaviours

Today's job market is increasingly competitive, and modern job prospects must be self-reliant and proactive. The career development literature is replete with theoretical models emphasizing the importance of individual agency and initiative in constructing a career path and identity (Mitchell, Levin, & Krumboltz, 1999). In the past, employers provided a great deal of guidance and structure towards an employee's career development and growth, but a changing job culture continues to shift this burden onto employees themselves. This is particularly the case for recent university graduates, who compete for few positions that are relevant to their field or require the degrees they have obtained. Accordingly, many vocational scholars have begun to investigate proactive behaviours which may allow for an upper hand in acquiring suitable employment, and which may protect against underemployment (Vos, Clippeleer & Dewilde, 2010; Sylva, Mol, Den Hartog, & Dorenbosch, 2017). Proactive career behaviours are anticipatory actions intended to positively influence oneself, or in a vocational context, one's

career. This may include forecasting the near future of one's career, actively developing skills with the intent to use them in more senior positions, as well as generic networking. More generally, proactive individuals foresee future opportunities, and react in anticipation of the future as opposed to acting reactively, or being passive.

Those who find themselves underemployed, or perceive an incongruence between the job they occupy versus the job they feel they deserve to occupy, may be particularly inclined to engage in proactive career behaviours in hopes of bettering their current situation. Indeed, Sylva, Mol, Den Hartog, and Dorenbosch (2017) found that engaging in proactive career behaviour (assessed as career initiative), increased perceived demands-abilities fit, suggesting that individuals can “enhance the alignment between their abilities and the demands of the job” (p.1). It is also worth noting that proactive career behaviours largely involve networking and collaboration with peers and mentors, and those engaging in them may more quickly learn of job openings, or may be favoured in an application process due to prior networking. Past research has found proactive career behaviours to be positively associated with subjective financial success, possibly protecting against the “pay” aspect of underemployment. Additionally, networking has been found to increase career and job satisfaction, known negative correlates of underemployment and perceived overqualification, and this relation has been evidenced among a recent graduate sample transitioning from college to work (Vos, Clippeleer & Dewilde, 2010; Kifle, Kler, & Shankar, 2018; Wassermann, Fujishiro, & Hoppe, 2017; Wolff & Moser, 2009).

McCormick, Guay, Colbert and Stewart (2012) noted that proactive behaviours are often engaged in by individuals with proactive personalities. The impact of proactive personalities in an organizational environment is often investigated through proactive behaviours acting as mediators, through which desirable career outcomes are achieved. Specifically, proactive

personality has been linked to increased salary and occupational prestige (through obtaining higher education; Converse, Pathak, Depaul-Haddock, Gotlib, & Merbedone, 2011), career success (through richer leader-member exchange; Yang & Chau, 2016), as well as promotion opportunities and career satisfaction (Seibert, Kraimer, & Crant, 2001). Accordingly, it is hypothesized that:

H₄: Proactive career behaviours will protect against (be negatively associated with) perceptions of underemployment

H₅: Proactive career behaviours will protect against (be negatively associated with) perceptions of overqualification

Due to the protective influence proactive career behaviours are hypothesized to have, and their proposed ability to increase perceived demands-abilities fit, it is expected that underemployment and overqualification perceptions are lesser among individuals engaging in proactive career behaviours. As perceptions of underemployment and overqualification weaken, their relation to variables of interest (personal, or organizational outcomes) may also weaken. More plainly, one may be less likely to internalize feelings of underemployment and allow them to manifest into personal and organizational outcome if they only feel “slightly underemployed”. Conversely, individuals may be more likely to allow feelings underemployment to manifest into personal and/or organizational outcomes if they feel greatly underemployed. Accordingly, it was hypothesized that proactive career behaviours would lessen perceptions of underemployment and overqualification, in turn weakening the relations between subjective underemployment/ perceived overqualification and personal/organizational outcomes.

H₆: Proactive career behaviours will moderate the relationship between subjective underemployment/perceived overqualification and personal outcomes (general well-being, self-esteem, and life satisfaction). The more proactive career behaviours an individual engages in, the weaker the predicted negative relation between subjective underemployment/perceived overqualification and personal outcomes

H₇: Proactive career behaviours will moderate the relation between subjective underemployment/perceived overqualification and organizational outcomes such that:

a.) As an individual engages in more proactive career behaviours, the predicted negative relation between subjective underemployment / perceived overqualification and desirable organizational outcomes will weaken.

b.) As an individual engages in more proactive career behaviours, the predicted positive relation between subjective underemployment/perceived overqualification and undesirable organizational outcomes will weaken.

Figure 1. The moderating effect of proactive career behaviours

Participants

A sample of 500 working-age participants was recruited using Amazon's Mechanical Turk (MTurk) service. Amazon's Mechanical Turk service provides a large and geographically diverse participant pool in which participants can engage in a wide assortment of "Human Intelligence Tasks" (HITs) from text-to-speech transcription, surveys, and so forth. Amazon Mechanical Turk data is affordable, fast-to-collect, and well-suited for research in the social sciences. More plainly, it allows for us to conveniently collect a diverse sample, which is particularly useful as undergraduate participant pools are not suitable to answer our research questions. Unsurprisingly, researchers have touted the utility of Amazon's Mechanical Turk, particularly as it provides researchers an opportunity to stay away from the tired and overused undergraduate participant pools, but also because it yields samples which are more generalizable to populations of interest (better geographical representation, more diverse age and ethnicities, and so forth; Buhrmester, Kwang, & Gosling, 2011; Follmer, Sperling, & Suen, 2017).

Respondents were first asked whether they had recently graduated from a North American university. Participants were also required to be at least 18 years old, and reside within Canada, the United States or Mexico, as determined by external IP address.

Amidst concerns regarding the quality of MTurk data, several measures were taken in attempts to increase the reliability of the data set. First, it was mandated that participants have over a 90% MTurk approval rating, acquired through consistent positive feedback from previous requestors. In addition, IP addresses were examined in order to mandate that participants reside in either Canada, the United States, or Mexico, as well as to protect against multiple entries from participants. Participants were asked whether they had graduated from a North American university program within the last 5 years; and those who fulfilled this requirement were eligible to complete the survey. The scale measures and demographic questions can be found in [Appendix A](#).

Measures

Underemployment / Perceived Overqualification. Participants completed the 37-item Subjective Underemployment Scale (Allan, Tay, & Sterling, 2016). The scale assesses six major domains of underemployment: pay, desired field, hours, involuntary temporary work, and poverty wage employment using a 7-point Likert scale. Questions include “I am underpaid compared to those with my level of knowledge” and “My status at work is lower than I deserve”. The scale was found to have a high level of internal consistency when examined as a whole, $\alpha = .96$, as well as when examining the individual subscales; underpayment ($\alpha = .97$), status discrepancy ($\alpha = .95$), hours discrepancy ($\alpha = .95$), involuntary temporary work ($\alpha = .95$), desired field, ($\alpha = .95$), and poverty wage employment ($\alpha = .96$).

In addition, the Scale of Perceived Overqualification (Maynard, Joseph, & Maynard, 2006) was used to assess participants' perceptions of overqualification in relation to educational status, and knowledge, skills, and abilities (KSAs). This scale was also found to have a high level of internal consistency, $\alpha = .92$.

Allan, Tay, and Sterling's (2017) subjective underemployment scale and Maynard, Joseph, and Maynard's perceived overqualification scale were highly correlated $r = .55$, exceeding Cohen's (1998) standard for large effects ($r > |.499|$). Accordingly, the scales were linearly combined to create a composite variable which more holistically encapsulates underemployment, while also protecting against multicollinearity issues.

Proactive Career Behaviours. Participants' engagement with proactive career behaviours was assessed using the 13-item Proactive Career Behavior scale (Strauss, Griffin, & Parker, 2012). This scale consists of four subscales assessing career planning (thinking ahead and developing skills which may be advantageous to one's career choice), proactive skill development (developing skills which would be advantageous in future desired positions), career consultation (speaking to colleagues and superiors about career aspirations), and network building (broadening one's relationships and support network through networking).

Participants endorse statements such as "I have developed skills which may not be needed so much now, but in future positions" using a 5-point Likert Scale. This scale was found to have a high level of internal consistency when examined as a whole, $\alpha = .89$, as well the when examined at the sub-scale level. More specifically, the subscale internal consistencies are as follows: career planning, $\alpha = .87$, proactive skill development, $\alpha = .76$, career consultation, $\alpha = .83$, and network building, $\alpha = .87$.

Organizational Citizenship Behaviours. Organizational citizenship behaviours (OCBs) are most often conceptualized as voluntary behaviours in which an individual goes above and beyond set organizational expectations, and “are not explicitly recognized by a formal reward system” (Organ 1988, p.4). OCBs are consistently related to important organizational outcomes such as job satisfaction, job performance, and employee retention (Bateman & Organ, 1983; Basu, Pradhan, & Tewari, 2017). In the present study, participants reported the frequency with which they engage in a variety of organizational citizenship behaviours using the 10-Item Short Version of the Organizational Behavior Checklist (Spector, Bauer, & Fox, 2010). Questions include “I volunteered for extra work assignments”, and “I took time to advice, coach, or mentor a co-worker”, and were appraised on a 5-point Likert scale. This scale was found to have a high level of internal consistency, $\alpha = .90$.

Counterproductive Workplace Behaviours. Counterproductive workplace behaviours (CPWBs), are intentional behaviours that go against the best interests of the company in which an employee resides (Sackett, Berry, Wiemann, & Laczko, 2006). Participants completed the 10-Item Short Version of the Counterproductive Work Behavior Checklist (Spector, Bauer, & Fox, 2010). Questions include “(Have you) purposely wasted your employer’s materials/supplies”, and “(have you) come to work late without permission”, and were appraised on a 5-point Likert scale. This scale was found to have a high level of internal consistency, $\alpha = .89$.

Affective Organizational Commitment. Affective organizational commitment refers to how strongly an individual desires to work in their organization, and is often fostered when an employee strongly identifies with a company’s mission, goals, and values (Meyer & Allen, 1991). Participants affective commitment was assessed using Meyer and Allen’s (1991) 8-item affective commitment scale. Questions include “I really feel as if this organization’s problems

are my own”, and “I do not feel ‘emotionally attached’ to this organization. This scale was found to have a high level of internal consistency in, $\alpha = .86$.

Turnover Intention. Turnover intention refers to how strongly an individual desires to leave an organization, and may be demonstrated by actively searching for jobs, or showing a longstanding desire to leave. Bothma and Roodt’s (2013) six-item Turnover Intentions Scale was used to measure turnover intentions. Questions include “How often do you dream about getting another job that will better suit your personal needs”, as well as “How often have you considered leaving your job”. This scale was found to have a high level of internal consistency, $\alpha = .86$.

General Well-being. Participants reported on their general well-being using the 27-item RYFF Adapted well-being scale (Ryff & Keyes, 1995). Questions include “In general, I feel I am in charge of the situation in which I live”, as well as “I live one day at a time and don’t really think about the future”, and were appraised on a six-point Likert scale. This scale was found to have a high level of internal consistency when examined as a whole, $\alpha = .92$, as well as when examined by its three sub-scales; environmental mastery, ($\alpha = .85$), personal growth ($\alpha = .85$), purpose in life ($\alpha = .87$).

Life Satisfaction. General life satisfaction was measured using Diener, Emmons, Larsen, and Griffin’s (1985) 5-item satisfaction with life scale. Questions include “In most ways, my life is close to ideal”, as well as “I am satisfied with my life”, are were appraised using a 5-point Likert scale. The scale was found to have a high level of internal consistency, $\alpha = .91$.

Self-Esteem. Participants rated their self-esteem using Rosenberg’s (1965) Self-Esteem scale. Questions include “On the whole, I am satisfied with myself”, as well as “at times I think I am no good at all”. Questions were assessed using a 4-point Likert scale. This scale was found to have a high level of internal consistency, $\alpha = .88$.

Procedure

The measures for this study were completed online through the survey platform Qualtrics. Participants were provided with a randomized code at the end of the study, which they entered into Amazon's Mechanical Turk for compensation. Scale items were randomized within scales to counteract any potential rank-order effects. Participants were also required to accurately answer two attention check questions, such as "Please select C for this answer".

Preliminary Analyses

Data Cleaning

Data Exemption. Nine participants were removed for spending an unreasonable amount of time on the survey ($+3.3SD$ above mean), and 72 participants were removed for failing at least one of two attention-check questions. Of the remaining 428 cases, 63.8% of the sample was female, and the average age was ($M = 28.79$ years, $SD = 6.69$, Range [18.00 – 56.00]).

Outliers. To assess the influence of outliers, observations which were greater than $|3.3|$ standard deviations away from a scale mean were removed, and analyses reconducted. Through doing so, extreme values which may disproportionately influence test statistics were removed. Results between analyses conducted with, and without, outliers did not notably differ in terms of the magnitude and directionality of effects, and on no occasion resulted in a difference of statistical significance. In addition, due to the wide range of reported ages (18 to 56), special attention was paid to ensure that the effects of underemployment / overqualification were consistent across age. A median split was used to divide the data set between those who are 27 or younger, and those who are not, and analyses were re-examined. Results did not meaningfully differ in comparison to examining the data set as a whole, although a large decrease in power slightly lessened the effect sizes, and slightly increased the p -values (e.g. p

= .02, not $p < .001$. Because the inclusion of outliers does not meaningfully alter the interpretation of the results in any way, they were included in all analyses.

Assumption Checks

Multicollinearity. In order to examine potential issues which may arise due to multicollinearity, variance inflation factors (VIFs) were investigated. In accordance with Ringle, Wende and Becker's (2015) conservative standards, variance inflation factors beneath five were deemed non-problematic. Within the hierarchical linear regressions conducted (H_3 , H_4 , H_5 , H_6 , H_7), the highest VIF value was $VIF = 1.69$. Special attention was paid to the four proactive career behaviour subscales, which did not display multicollinearity issues, highest $VIF = 1.69$.

Normality. Normality was assessed through visual examination of histograms and through examining the presence of two distinct tails. Skewness and kurtosis values were also investigated, with values greater than $|2.0|$ raising concern for further intervention (Tabachnick & Fidell, 2007). Issues surrounding normality are not expected to exert a strong influence as linear regression tends to be robust to minor assumption violations (including normality), particularly when dealing with large sample sizes ($N = 500$). Each scale used showed skewness and kurtosis values within Tabachnick and Fiddell's recommended non-problematic range (less than $|2.0|$) with the exception of the counterproductive workplace behaviours scale. The counterproductive workplace behaviours was found to be positively skewed (skewness = 1.55), with many participants stating they engage in few to no counterproductive workplace behaviours. Additionally, the scale was found to yield data that was highly leptokurtic, (kurtosis = 3.02), with a distinct peak around the 2.0 Likert value. Corrections such a log, or inverse log transformation were not considered as it would strongly hinder the interpretability of regression coefficients, and analyses were conducted despite this breach in normality. As this is the only assumption

violation throughout the study, it is anticipated that the robustness of general linear modelling will yield accurate results.

Normality was also examined with P-P plots depicting the relation between regression standardized residuals and regression standardized predicted values. Both dependent variables (subjective underemployment and perceived overqualification) yielded P-P plots strongly resembling linear diagonal lines, suggesting normally distributed residuals.

Homoscedasticity. In order to examine homoscedasticity, standardized predicted values as well as observed values were plotted, and examined for the presence of clusters, or “cone or fan” shapes. For both subjective underemployment and perceived overqualification, these plots depicted homoscedastic error variance, with patterns resembling “shotgun output” suggesting that error variance is similar at each level of the Likert scales.

Analytic Strategy

Multivariate Multiple Regression. A multivariate multiple regression was conducted by running a MANOVA command in SPSS, and printing regression coefficients. The use of multivariate multiple regression lowers the experiment-wise Type-I error rate as non-significant multivariate effects are not probed further. Similarly, standardized betas are not examined in the absence of a significant univariate omnibus test. Finally, combining many relations of interest within a singular multivariate model provides more accurate standard error estimates, which may also provide a minute increase in statistical power.

In all multivariate multiple regression analyses, subjective underemployment and perceived overqualification were linearly combined and regressed on a linear combination of the dependent variables; general well-being, self-esteem, and life satisfaction (Hypothesis 1); affective organizational commitment and organizational citizenship behaviours (Hypothesis 2a),

as well as counterproductive workplace behaviours and turnover intention (Hypothesis 2b).

Univariate analysis was then used to follow up multivariate analysis, and standardized beta coefficients were reported for each individual significant relationship between independent and dependent variable.

Interactions. In order to investigate the proposed moderation model (Hypotheses, 6, 7a, and 7b), an interaction term was created between subjective underemployment and proactive career behaviours, and entered in Step 2 of a hierarchical linear regression.

Results

Sample

The sample collected from Amazon Mechanical Turk yielded a dataset which is generally representative of the North American population around the sampled age ($M=28.79$ years). Our sample is 71% Caucasian, which is demographically similar to both Canada (73%) as well as the United States (Bureau of Labor Statistics, 2018; Statistics Canada, 2016). In addition, participants reported similar lengths of organizational tenure ($M=28$ months) in comparison to university-educated Americans aged 25-34 years ($M=33$ months). Interestingly, participants' self-reported annual earnings are similar to the United States median income for 29-year-olds (\$37,284.00), despite not engaging in traditional full-time work (35 hours +).

Table 1.

Participant characteristics

Age (SD)	Gender	Ethnicity	<i>M</i> Organizational Tenure	<i>M</i> Weekly Work Hours	<i>M</i> Annual income
28.79 (6.69)	64% female 36% male	71% Caucasian 9% Asian 7% Black 8% Hispanic 5% Other	2 years, 4 months	30.2	\$36,250 USD

Hypothesis Tests

A multivariate multiple regression was used to test hypothesis 1, that subjective underemployment (H_{1A}) and perceived overqualification (H_{1B}) would be negatively associated with several personal life outcomes (self-esteem, well-being, and life satisfaction). When examining the collective influence that subjective underemployment and perceived overqualification exert on the three personal life outcomes, the multivariate test statistic was significant, Wilks' $\Lambda = .77$, $F(6,784) = 18.46$, $p < .001$, indicating good fit of the omnibus model (correlations depicting the relations can be found in Table 1). In the next step of the analysis, univariate tests were conducted to examine how subjective underemployment and perceived overqualification collectively influence each of the three outcomes. Together, subjective underemployment and perceived overqualification explained a significant portion of the variance in self-esteem, $R^2 = .13$, $F(2,394) = 30.30$, $p < .001$, satisfaction with life, $R^2 = .19$, $F(2,394) = 44.73$, $p < .001$, and general well-being, $R^2 = .13$, $F(2,394) = 30.42$, $p < .001$. When the role of each independent variable was examined separately, subjective underemployment was significantly negatively associated with self-esteem, $\beta = -.35$, $t = -6.52$, $p < .001$, satisfaction with life, $\beta = -.35$, $t = -6.66$, $p < .001$, and general well-being, $\beta = -.40$, $t = -7.35$, $p < .001$. Perceived overqualification on the other hand, was only significantly negatively associated with satisfaction with life, $\beta = -.13$, $t = -2.43$, $p = .02$, and was not significantly related to either self-esteem, or general wellbeing.

Table 2.

Means, standard deviations, correlations, and internal consistencies of the subjective underemployment scale, the perceived overqualification scale, and personal outcomes.

	1	2	3	4	5
1 Subjective Underemployment	1	.52**	-.38**	-.43**	-.37**
2 Perceived Overqualification		1	-.21**	-.32**	-.15**
3 Self-Esteem			1	.61**	.71**
4 Satisfaction with Life				1	.54**
5 General Well-being					1
<i>M</i>	3.87	4.55	2.96	4.25	4.32
<i>(SD)</i>	1.23	1.53	0.58	1.52	0.77
α	.96	.92	.88	.91	.92

Note. * represents $p < .05$, ** represents $p < .001$.

The findings from these analyses generally support hypothesis 1A and hypothesis 1B, suggesting that the more individuals perceive themselves to be underemployed and overqualified, the stronger the negative effects on their self-esteem, life satisfaction, and general well-being. This negative relationship seems to be more consistent when subjective underemployment is used as the independent variable, as opposed to perceived overqualification.

Hypothesis 2 also used multivariate multiple regression to examine the relation between subjective underemployment (H_{2A}) and perceived overqualification (H_{2B}) with desirable organizational outcomes (organizational citizenship behaviours, and affective organizational commitment). The test of the overall multivariate model was significant, Wilks' $\Lambda = .78$, $F(4,782) = 25.78$, $p < .001$. Collectively, subjective underemployment and perceived overqualification accounted for a significant portion of variance in the two desirable

organizational outcomes. Univariate follow-up tests were conducted to examine how subjective underemployment and perceived overqualification collectively influence each desirable organizational outcome. Together, subjective underemployment and perceived overqualification, explained a significant portion of the variance in organizational commitment, $R^2 = .20$, $F(2,392) = 50.02$, $p < .001$, and organizational citizenship behaviours, $R^2 = .04$, $F(2,392) = 9.19$, $p < .001$.

When the role of each independent variable was examined separately, higher levels of subjective underemployment were associated with lower levels of both affective organizational commitment, $\beta = -.35$, $t = -6.52$, $p < .001$, and organizational citizenship behaviours, $\beta = -.24$, $t = -4.23$, $p < .001$. Similarly, the more people perceived themselves as overqualified, the lower their reported affective organizational commitment, $\beta = -.15$, $t = -2.77$, $p = .02$. Perceived overqualification was not, however, significantly associated with organizational citizenship behaviours, $\beta = .09$, $t = 1.56$, $p = .12$.

The findings from these analyses generally support hypothesis 2A and hypothesis 2B, suggesting that the more individuals perceive themselves to be underemployed and overqualified, the stronger the negative effects on desirable workplace outcomes such as organizational citizenship behaviours, and affective organizational commitment. This negative relationship seems to be more consistent with subjective underemployment, in comparison with perceived overqualification.

Hypothesis 3 was concerned with the relations between subjective underemployment / perceived overqualification and a variety of organizational outcomes. Table 2 includes correlations and other descriptive statistics related to this hypothesis. To test Hypothesis 3, that subjective underemployment (H_{3A}) and perceived overqualification (H_{3B}) are positively associated with undesirable organizational outcomes (turnover intention, and counterproductive

workplace behaviours), a multivariate multiple regression was again conducted. The overall model was statistically significant, Wilks' $\Lambda = .62$, $F(4,784) = 53.64$, $p < .001$, prompting a series of univariate follow-up tests. Together, (subjective underemployment and perceived overqualification) predicted a significant portion of variance in both turnover intentions, $R^2 = .39$, $F(2,393) = 132.79$, $p < .001$, and counterproductive workplace behaviours $R^2 = .04$, $F(2,392) = 8.90$, $p < .001$. As levels of subjective underemployment increase, so too does turnover intention, $\beta = .49$, $t = 10.92$, $p < .001$, and self-reported counterproductive workplace behaviours, $\beta = .17$, $t = 2.95$, $p = .003$. Perceived overqualification was also positively associated with turnover intention, $\beta = .21$, $t = 4.62$, $p < .001$, but was not significantly associated with counterproductive workplace behaviours, $\beta = .06$, $t = 1.03$, $p = .30$.

In summary, Hypothesis 3 is partially supported. Subjective underemployment and perceived overqualification are significantly negatively associated with turnover intentions, however perceived overqualification does not exert a significant influence on counterproductive workplace behaviours.

Table 3.

Means, standard deviations, correlations and internal consistencies between subjective underemployment, overqualification, proactive career behaviours, and organizational outcomes

	1	2	3	4	5	6	7
1 Subjective Underemployment	1	.52**	-.26**	-.44*	-.19**	.59**	.20**
2 Perceived Overqualification		1	-.28**	-.36**	-.04	.46**	.14**
3 Proactive Career Behaviours			1	.33**	.34**	-.26**	-.09
4 Affective Organizational Commitment				1	.27**	-.66**	-.21**
5 Organizational Citizenship Behaviours					1	-.14	.04
6 Turnover Intention						1	.25**
7 Counterproductive Workplace Behaviours							1
<i>M</i>	3.87	4.55	3.71	4.09	3.39	3.02	1.74
<i>(SD)</i>	1.23	1.53	0.72	1.35	0.99	0.96	0.72
<i>α</i>	.96	.92	.89	.86	.90	.86	.89

Note. * represents $p < .05$, ** represents $p < .001$.

Perceptions of Subjective Underemployment and Overqualification: The Role of Proactive Career Behaviours

Table 4.

Descriptive statistics and correlations between underemployment, perceived overqualification, and the proactive career behaviour subscales.

		1	2	3	4	5	6
1	Subjective Underemployment	1	.52**	-.20**	-.16**	-.23**	-.21**
2	Perceived Overqualification		1	-.23**	-.13**	-.24**	-.24**
3	PCB Career Planning			1	.56**	.42**	.37**
4	PCB Skill Development				1	.50**	.39**
5	PCB Career Consultation					1	.53**
6	PCB Networking						1
	<i>M</i>	3.87	4.54	3.71	3.96	3.61	3.58
	<i>SD</i>	1.23	1.53	.93	.77	1.01	1.03

Note. * represents $p < .05$, ** represents $p < .001$.

For both hypotheses 4 and 5 which examine proactive career behaviour's influence on subjective underemployment (H₄) and perceived overqualification (H₅), three control variables were chosen to eliminate confounding influences which may lessen the evidentiary value of the regression results.

Specifically, age was controlled for as relations between age and organizational outcomes we intend to measure have been documented (organizational commitment, turnover intention; Rhodes 1983). Gender was controlled for as it has been found to be associated with turnover intention (Lyness & Judiesch, 2001) organizational citizenship behaviours (Cameron & Nadler, 2013) and organizational commitment (Marsden, Kallegerg, & Cook, 1993). Finally, grade point

average (GPA) was controlled for as it has previously been found to be related to work-engagement, a known correlate of several of the organizational measures we measure. When conducting the regression, Block 1 consisted of the control variables, while Block 2 consisted of the four subscales of the Proactive Career Behaviour scale (career planning, skill development, career consultation, and networking). The dependent variables examined were subjective underemployment and perceived overqualification.

When examining hypothesis 4, that proactive career behaviours protect against (i.e., negatively associated with) subjective underemployment, I conducted a hierarchical linear regression (See Table 3). The omnibus test investigating Model 1 (only control variables) was non-significant, $R^2 = .01$, $F(3, 423) = 1.74$, $p = 0.14$. The addition of the four proactive career behaviour subscales yielded a significant increase in the model's ability to predict underemployment scores, $\Delta R^2 = 0.07$, $F(4, 419) = 8.06$, $p < .001$, $R^2 = .08$. More specifically, examination of standardized betas shows a significant relation between underemployment and the career consultation subscale, $\beta = -0.12$, $t = -2.02$, $p = 0.044$, as well as underemployment and the networking subscale, $\beta = -0.12$, $t = 2.02$, $p = .044$. In other words, more proactive career behaviours in the form of networking and career consultation were associated with lower levels of subjective underemployment. Interestingly, neither career planning, $\beta = -0.11$, $t = 1.83$, $p = .07$, nor skill development, $\beta = 0.01$, $t = 0.16$, $p = 0.87$ were significant predictors of subjective underemployment.

Table 5.

Results of hierarchical regression model examining relationship between Proactive Career Behaviours and Subjective Underemployment

	Model 1			Model 2		
	Unstandardized	Standardized		Unstandardized	Standardized	
	B	SE	β	B	SE	β
Constant	4.05	.36	-	5.74	.49	-
Age	.13	.12	.05	-.02	.01	-.10
Gender	.03	.04	.04	.06	.12	.02
GPA				.02	.04	.03
<i>Proactive Career Behaviours</i>						
Career Planning				-.14	.08	-.11
Proactive Skill Development				.02	.10	.01
Career Consultation				-.15	.07	-.12*
Network Building				-.14	.07	-.12*
<i>F</i>			1.74			5.40
<i>R</i> ²			.01			.08**

Note. * $p < .05$, ** $p < .001$.

When examining hypothesis 5, that proactive career behaviours protect against (i.e., are negatively associated with) perceived overqualification, I conducted a hierarchical linear regression (See Table 4). An omnibus test investigating Model 1 (only control variables) was non-significant, $R^2 = .02$, $F(3, 422) = 2.35$, $p = 0.07$. The addition of the four proactive career behaviour subscales yielded a significant increase in the model's ability to predict underemployment scores, $\Delta R^2 = 0.09$, $F(4, 418) = 10.44$, $R^2 = .11$, $p < .001$. More specifically, examination of standardized betas showed a significant relation between perceived overqualification and the career consultation subscale, $\beta = -0.13$, $t = -2.17$, $p = 0.03$, the networking subscale, $\beta = -0.14$, $t = -2.54$, $p = .01$, as well as the career planning subscale, $\beta = -.17$, $t = 3.00$, $p < .001$. Interestingly, there was not a significant relation between perceived overqualification and both the skill development subscale, $\beta = 0.09$, $t = 1.46$, $p = .14$.

Table 6.

Results of hierarchical regression model examining relationship between Proactive Career Behaviours and Perceived Overqualification

	Model 1			Model 2		
	Unstandardized		Standardized	Unstandardized		Standardized
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Constant	3.82	.46		5.90	.60	
Age	-.01	.01	-.01	-.01	.01	-.03
Gender	.39	.15	.12	.28	.15	.09
GPA	.05	.05	.05	.04	.05	.04
<i>Proactive Career Behaviours</i>						
Career Planning				-.27	.09	-.17**
Proactive Skill Development				.17	.12	.09
Career Consultation				-.20	.09	-.13*
Network Building				-.21	.08	-.14*
<i>F</i>			2.35			7.06
<i>R</i> ²			.02			.11

Note. * $p < .05$, ** $p < .001$.

In order to investigate Hypothesis 6, that proactive career behaviours will moderate the relation between subjective underemployment and personal outcomes such that the observed negative relation will become weaker (an improvement) as proactive career behaviours increase, I conducted three hierarchical linear regressions using self-esteem, life satisfaction, general well-being as the dependent variables in three separate models. All three regressions abide by the following format: Block 1 consisted of subjective underemployment as well as proactive career behaviours (mean-centered), and block 2 consisted of an interaction term between subjective underemployment and proactive career behaviours.

When assessing self-esteem as the dependent variable, subjective underemployment and proactive career behaviours accounted for a significant portion of variance, $R^2 = .25$, $F(2,424) = 72.14$, $p < .001$ (See Table 5). There was a main effect of proactive career behaviours, $B = 0.28$, $SE = 0.04$, $t = 7.93$, $p < .001$, demonstrating a positive association between proactive career

behaviours and self-esteem. There was also a main effect of subjective underemployment, $B = -0.14$, $SE = 0.02$, $t = -6.65$, $p < .001$, demonstrating a negative relationship between subjective underemployment and self-esteem. Block 2 which added the interaction term, did not result in a significant R^2 increase, $\Delta R^2 = .003$, $F(1,423) = 2.05$, $p = .15$

Table 7.

The moderating effect of proactive career behaviours on the underemployment(IV)/self-esteem(DV) relation.

	Model 1			Model 2		
	Unstandardized	Standardized		Unstandardized	Standardized	
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Constant	3.49	.08		3.46	.02	
Subjective Underemployment	-.14	.02	-.29**	-.13	.02	-.28*
Proactive Career Behaviours	.28	.04	.35**	.44	.12	.55**
SU*PCB Interaction				-.04	.03	-.21
<i>F</i>			72.14**			48.89**
<i>R</i> ²			.25**			.26**

Note. * $p < .05$, ** $p < .001$.

When assessing life-satisfaction as the dependent variable, subjective underemployment and proactive career behaviours accounted for a significant portion of variance, $R^2 = .29$, $F(2,424) = 88.22$, $p < .001$ (See Table 6). There was a significant main effect of proactive career behaviours, $B = 0.73$, $SE = 0.09$, $t = 8.00$, $p < .001$, as well as subjective underemployment $B = -0.42$, $SE = 0.05$, $t = -8.09$, $p < .001$. Block 2 which added the interaction term, did not result in a significant R^2 increase, $\Delta R^2 = .001$, $F(1,423) = 1.46$, $p = .23$.

Table 8.

The moderating effect of proactive career behaviours on the underemployment(IV)/life satisfaction(DV) relation.

	Model 1			Model 2		
	Unstandardized		Standardized	Unstandardized		Standardized
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Constant	5.86	.21		5.93	.22	
Subjective Underemployment	-.42	.05	-.34**	-.43	.05	-.35**
Proactive Career Behaviours	.73	.09	.35**	.38	.30	.18
SU*PCB Interaction				.08	.07	.17
<i>F</i>			88.22**			59.37**
<i>R</i> ²			.29**			.30**

Note. * $p < .05$, ** $p < .001$.

When assessing general well-being as the dependent variable, subjective underemployment and proactive career behaviours accounted for a significant portion of variance, $R^2 = .30$, $F(2,424) = 90.36$, $p < .001$ (See Table 7). There was a significant main effect of proactive career behaviours, $B = 0.45$, $SE = 0.05$, $t = 9.88$, $p < .001$, as well as a significant main effect of subjective underemployment, $B = -0.16$, $SE = 0.04$, $t = -5.89$, $p < .001$. Block 2 which added the interaction term, did not result in a significant R^2 increase, $\Delta R^2 = .002$, $F(1,423) = 1.41$, $p = .24$, failing to provide support for Hypothesis 6.

Table 9.

The moderating effect of proactive career behaviours on the underemployment(IV)/general well-being(DV) relation.

	Model 1			Model 2		
	Unstandardized	Standardized		Unstandardized	Standardized	
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Constant	4.95	.11		4.92	.11	
Subjective Underemployment	-.16	.03	-.26**	-.16	-.03	-.25**
Proactive Career Behaviours	.45	.05	.42**	.62	.15	.58**
SU*PCB Interaction				-.04	.04	-.16
<i>F</i>			90.36**			60.77**
<i>R</i> ²			.30**			.30**

Note. * $p < .05$, ** $p < .001$.

Collectively, the results provide no evidence to support Hypothesis 6. While large main effects were consistent across the three personal outcomes, inclusion of the interaction term did not provide a significant increase in the model's ability to predict the outcomes. Although the evidence does suggest that proactive career behaviours and subjective underemployment are each associated with personal life outcomes, they do not appear to work together to exert their influence on these outcomes. In other words, the negative relationship between subjective underemployment and personal life outcomes appears unaffected by proactive career behaviours.

In order to examine Hypothesis 7a, that proactive career behaviours will moderate the predicted negative relation between subjective underemployment and desirable organizational outcomes such that: as proactive career behaviours increase, the magnitude of this relation will lessen (an improvement), I conducted two hierarchical linear regressions. Similar to the methodology used in testing Hypothesis 6, block 1 includes subjective underemployment and

proactive career behaviours (mean-centered), and block 2 includes the interaction term (subjective underemployment X proactive career behaviours).

When assessing affective organizational commitment as the dependent variable, subjective underemployment and proactive career behaviours accounted for a significant portion of variance, $R^2 = .24$, $F(2,424) = 68.18$, $p < .001$ (See Table 8). There was a significant main effect of proactive career behaviours, $B = 0.43$, $SE = 0.08$, $t = 5.19$, $p < .001$, as well as a significant main effect of subjective underemployment, $B = -0.42$, $SE = 0.05$, $t = -8.76$, $p < .001$. Block 2 which added the interaction term, did not result in a significant R^2 increase, $\Delta R^2 = .001$, $F(1,423) = 0.50$, $p = .48$.

Table 10.

The moderating effect of proactive career behaviours on the underemployment(IV)/affective organizational commitment(DV) relation.

	Model 1			Model 2		
	Unstandardized	Standardized		Unstandardized	Standardized	
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Constant	5.71	.19		5.68	.20	
Subjective Underemployment	-.42	.05	-.38**	-.41	.05	-.38**
Proactive Career Behaviours	.43	.08	.23**	.61	.28	.33**
SU*PCB Interaction				-.05	-.06	-.10
<i>F</i>			68.18**			45.57**
<i>R</i> ²			.24**			.24**

Note. * $p < .05$, ** $p < .001$.

When assessing organizational citizenship behaviours as the dependent variable, subjective underemployment and proactive career behaviours accounted for a significant portion of variance, $R^2 = .13$, $F(2,422) = 31.15$, $p < .001$ (See Table 9). There was a significant main effect of proactive career behaviours, $B = 0.43$, $SE = 0.07$, $t = 6.65$, $p < .001$, as well as a

significant main effect of subjective underemployment, $B = -0.09$, $SE = 0.04$, $t = -2.25$, $p = .02$.

Block 2 which added the interaction term, did not result in a significant R^2 increase, $\Delta R^2 = .001$, $F(1,421) = 0.36$, $p = .55$.

Table 11.

The moderating effect of proactive career behaviours on the underemployment (IV)/organizational citizenship behaviour (DV) relation.

	Model 1			Model 2		
	Unstandardized	Standardized		Unstandardized	Standardized	
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Constant	3.75	.15		3.72	.16	
Subjective Underemployment	-.09	.04	-.11*	-.09	.04	-.11*
Proactive Career Behaviours	.43	.07	.31**	.56	.22	.40*
SU*PCB Interaction				-.30	.05	-.09
<i>F</i>			31.15**			20.83**
<i>R</i> ²			.13**			.13**

Note. * $p < .05$, ** $p < .001$.

In order to examine Hypothesis 7b, that proactive career behaviours will moderate the predicted positive relation between subjective underemployment and undesirable organizational outcomes such that: as proactive career behaviours increase, the magnitude of this relationship will lessen (an improvement), I conducted two hierarchical linear regressions.

When assessing counterproductive workplace behaviours as the dependent variable, subjective underemployment and proactive career behaviours accounted for a significant portion of variance, $R^2 = .04$, $F(2,423) = 8.79$, $p < .001$ (See Table 10). The main effect of proactive career behaviours was not significant, $B = -0.05$, $SE = 0.05$, $t = -0.93$, $p = .35$, however there was a significant main effect of subjective underemployment, $B = 0.11$, $SE = 0.03$, $t = 3.71$, $p < .001$. The inclusion of the interaction term in block 2 yielded a significant improvement in the model's

ability to predict counterproductive workplace behaviours, $\Delta R^2 = .015$, $B = 0.42$, Model 2:

$F(1,422) = 8.13$, $p < .001$, and was further probed through the examination of simple slopes.

Table 12.

The moderating effect of proactive career behaviours on the underemployment

(IV)/counterproductive workplace behaviour (DV) relation.

	Model 1			Model 2		
	Unstandardized	Standardized		Unstandardized	Standardized	
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Constant	1.33	.12		1.41	.12	
Subjective Underemployment	.11	.03	.18**	.09	.03	.16*
Proactive Career Behaviours	-.05	.05	-.05	-.45	.16	-.45*
SU*PCB Interaction				.10	.04	.42*
<i>F</i>			8.79**			8.13**
<i>R</i> ²			.04**			.06**

Note. * $p < .05$, ** $p < .001$.

An examination of simple slopes revealed that proactive career behaviours moderate the relation between underemployment and counterproductive workplace behaviours only when subjective underemployment is high (+1 *SD*), $\beta = 0.28$, $t = 4.52$, $p < .001$, and not when subjective underemployment is low (-1 *SD*), $\beta = 0.04$, $t = -0.50$, $p = 0.62$ (See Figure 2). When participants rated themselves highly on underemployment (+1 *SD*), despite greatly engaging in proactive career behaviours (+1 *SD*), they were significantly more likely to engage in counterproductive workplace behaviours in comparison to their highly underemployed (+1 *SD*), but low-proactive-career-behaviour peers. (-1 *SD*). This finding suggests that fruitless engagement in proactive career behaviours may contribute to counterproductive workplace behaviours. Although the present study does not investigate casual mechanisms underpinning this relationship, it is worth noting that frustration is a strong antecedent of counterproductive

workplace behaviours, and logically may be elicited in high underemployment/high proactive career behaviour environments. (Norwood, 2018).

Figure 2.

Analysis of simple slopes probing the significant interaction between subjective underemployment and proactive career behaviours on counterproductive workplace behaviours

When assessing turnover intention as the dependent variable, subjective underemployment and proactive career behaviours accounted for a significant portion of variance, $R^2 = .36$, $F(2,422) = 120.63$, $p < .001$ (See Table 11). There was a significant main effect of proactive career behaviours, $B = -0.16$, $SE = 0.05$, $t = -2.93$, $p < .001$, as well as a significant main effect of subjective underemployment, $B = 0.44$, $SE = 0.03$, $t = 13.97$, $p < .001$.

Block 2 which added the interaction term, did not result in a significant R^2 increase, $\Delta R^2 = .002$, $F(1,423) = 1.59$, $p = .20$.

Table 13.

The moderating effect of proactive career behaviours on the underemployment (IV)/turnover intention (DV) relation.

	Model 1			Model 2		
	Unstandardized	Standardized		Unstandardized	Standardized	
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Constant	1.34	.13		1.38	.13	
Subjective Underemployment	.44	.03	.56**	.43	.03	.55**
Proactive Career Behaviours	-.16	.05	-.12*	-.37	.18	-.28*
SU*PCB Interaction				.05	.04	.17
<i>F</i>			120.63**			81.06**
<i>R</i> ²			.36**			.37**

Note. * $p < .05$, ** $p < .001$.

Discussion

The present study sought to investigate the roles of subjective underemployment, perceived overqualification and proactive career behaviours in relation to personal and organizational outcomes. In accordance with previous literature, it was found that underemployment and perceived overqualification exert a negative influence both on a personal level (general well-being, self-esteem, life satisfaction), as well as within organizations (OCBs, CWBs, affective organizational commitment, and turnover intention). As predicted, relations between underemployment/perceived overqualification and personal outcomes strongly resembled existent literature examining unemployment. Specifically, underemployment showed a strong negative correlation with life satisfaction, self-esteem, and general wellbeing, supporting findings from several other studies (Chen & Hou, 2018; Jehoel-Gisbers & Groot, 1989; Paul &

Moser, 2009). The magnitude of these associations was very strong, but the relationship between subjective underemployment and personal outcomes was overall stronger, and more consistent (r 's between $-.37$ and $-.43$) relative to perceived overqualification (r 's between $-.15$ and $-.32$). This may suggest that feeling overqualified exerts a somewhat less powerful influence on mental health outcomes in comparison to feeling underemployed. Indeed, subjective underemployment encompasses a number of dimensions of the experience, including pay, status, involuntary temporary work, hour discrepancy, and field, and may more fully encapsulate the negative outcomes of inadequate employment.

The MANOVA model within the present study measured both perceived overqualification and subjective underemployment collectively (as a linear combination), and found that the composite variable accounts for much more variance than either subjective underemployment, or perceived overqualification alone, despite being highly correlated. Indeed, Allan, Tay, and Sterling's (2017) subjective underemployment scale was developed bearing in mind several well-established perceived overqualification scales exist, including the one used in the present research (Maynard, Joseph, & Maynard 2006). Accordingly, I argue, that presently the best way to assess the experience of underemployment is through the use of both Allan et al.'s (2017) subjective underemployment scale, coupled with a validated measure of perceived overqualification.

Interestingly, *underemployment's* relation to personal outcomes is similar, if not stronger than, the relation between unemployment and personal outcomes found in previous studies, despite the potential benefits of participants engaging in at least some form of employment. A meta-analysis consisting of 52 independent studies and 22,672 participants by McKee-Ryan, Wanberg, Song and Kinicki (2005) found that unemployed individuals report significantly lower

levels of mental health ($d_c = -.57$), as well as life satisfaction ($d_c = -.48$) compared to their employed peers. When converting these effect sizes to Pearson's r (Rosenthal, 1994), the effect of unemployment on mental health becomes ($r = -.27$), whereas the effect on life satisfaction becomes ($r = -.23$). These effect sizes are notably smaller than those found in the present study, which may suggest that *underemployment* negatively affects mental health and wellbeing differently than does unemployment.

Overall, perceived overqualification exerted less influence on both personal and organizational outcomes in comparison to subjective underemployment, but was still found to be a significant predictor. Perceived overqualification was also significantly related to personal outcomes including general well-being, life satisfaction, and self-esteem, similar to findings that have linked perceived overqualification to depression, stress, and psychological well-being (Johnson & Johnson, 1996), as well as emotional exhaustion and stress (Navarro, Mas & Jimenez (2010). The observed relation between perceived overqualification and general well-being ($r = -.15$) is notably smaller than that found in past meta-analytic results ($\rho = -.26$), but remains statistically significant and in the same direction (Harari, Manapragada, & Viswesvaran, 2017).

The convergence of the present findings with those from previous literature strengthens an existent concern regarding the impact of underemployment on the personal lives of the underemployed. Negative mental health outcomes have been linked to a myriad of undesirable physical health outcomes such as the relation between depression and diabetes (Diabetes Canada, 2018), depression and heart disease (De Hert, Detraux, & Vancampfort, 2018), as well as the relation between mood and anxiety disorders and chronic physical conditions such as hypertension or arthritis (Evans, et al., 2006). The present study found strong negative relations between subjective underemployment and perceived overqualification and the mental health

outcomes assessed (self-esteem, general well-being, and life satisfaction), all of which have been found to be strongly associated with depression (Guney, Kalafat, & Boysman, 2010; Orth, Robins, & Roberts, 2008; Ramkisson, Pillay, & Sartorius, 2016). Accordingly, it is certainly possible that, if experienced over a long period of time, the negative mental health outcomes associated with underemployment and perceived overqualification could eventually progress to more serious outcomes such as depression and other negative effects on mental and physical health.

In addition to effects on mental health and well-being, the experience of subjective underemployment may also be associated with health-related behaviours and physical health outcomes. Some researchers have partially attributed the negative physical health effects of unemployment to lower socio-economic status, an issue which is also experienced by the underemployed (Klein-Hesselink, & Spruit, 1992). Similarly, life satisfaction, self-esteem, and general well-being have been found to be negatively associated with self-reported health issues, as well as health behaviours such as smoking tobacco, being physically inactive, or not using sun protection (Grant, Wardle, & Steptoe, 2009). It is evident that underemployment is not merely an economic or organizational issue, but rather it has the potential to negatively affect the physical and mental health of the underemployed.

Reciprocal relationships have also been documented between poor mental health and other factors related to a poorer quality of life, such as lower socioeconomic status, or living in a less resource-intensive neighbourhood (Cutrona, Wallace, & Wesner, 2008; Isohanni, et al., 2001). Poor mental health may lead to living a lesser quality of life, yet living a lesser quality of life may also lead to poor mental health. In turn, individuals often find themselves trapped within this cycle due to their physical and infrastructural surroundings. It is certainly possible

that people who are experiencing poor mental health, in part due to subjective underemployment or perceived overqualification, may find themselves within this cycle, making finding suitable employment increasingly difficult. Underemployed individuals may also more likely to rely on government aid for a variety of reasons. Perhaps their contract has expired, unexpected medical bills are not covered by benefits, or simply because they are earning very little money. The financial difficulties associated with underemployment and poor pay can make it difficult for people to secure and keep better employment. If, for example, a person finds it difficult to attend a job interview, dress appropriately, or make it to work on time, they will certainly have trouble breaking the cycle of underemployment. Financial constraints can also prohibit people from engaging in career-advancing activities such as pursuing further education and/or credentials, possibly forcing some underemployed individuals to choose between poverty or career advancement.

Underemployment among Recent Graduates

Underemployment is a problem affecting more and more people in contemporary society, and young people seem to be particularly hard hit by this reality. The problem of underemployment among recent graduates has puzzled many, and the search for explanations has gone in a number of directions. Many have situated the cause of the problem within the individual. As the vast majority of recent university graduates in our sample are considered millennials/generation Y (born between 1980-2000) or generation Z (born between 2000-2010), negative stereotypes surrounding younger generations in the workplace may become progressively problematic when coupled with underemployment perceptions. Harsh stereotypes which suggest that young adults of today are entitled, narcissistic, and unwilling to work hard, are well-known. Article titles such as “Millennials: The Me Me Me Generation” (Time Magazine,

2013), or “Do Millennials Have a Lesser Work Ethic?” (Psychology Today, 2016), have become increasingly common, and led many researchers to investigate generational differences in the workplace. In contrast, however, the majority of recent academic literature examining millennials/generation Y in the workplace has found that although they prefer greater autonomy and more consistent feedback, millennials prefer a similar work environment as older generations, with researchers noting there are many more similarities than differences (Cennamo, & Gardner, 2008; Kowske, Rasch, & Wiley, 2010; Real, Mitnick, & Maloney, 2010). Indeed, Cennamo et al., (2008) noted that intrinsic work values (intellectual stimulation, challenge), extrinsic work values (status, job security), and altruistic work values (contribution to society), do not strongly differ between baby boomers (1946-1961), generation X (1962-1979), or millennials/generation Y (1980-2000). However, the youngest generation (generation Y), valued freedom work-values (autonomy, work-life balance), significantly more in comparison to baby boomers or generation X.

Indeed, work-life balance has been found to result in a myriad of positive outcomes including increased corporate performance and effectiveness, yet many positions still exist which may not offer the amount of work/life balance sought after by recent graduates (Beauregard & Henry, 2009). This is unfortunate, as perceptions of inadequate work-life balance may be perceived as an incongruence in person-job fit, and may signal underemployment to employees. This may also be a difficult issue to remedy, as the advocacy of work-life balance lends itself to existent stereotypes (e.g. laziness among younger generation workers), possibly exerting influence in how calls for change are addressed\

Underemployment and Person-Job Fit: Implications for Organizations

The present study found that subjective underemployment and perceived overqualification were positively associated with turnover intentions and counterproductive workplace behaviours, and negatively associated with affective organizational commitment and organizational citizenship behaviours. This is in accordance with previous research linking high perceived underemployment with undesirable organizational outcomes (Barazzetta, Clark & D'Ambrosio, 2017; Feldman & Turnley, 1995), and low perceived underemployment with desirable organizational outcomes (Chen, 2009; Williams & Anderson, 1991). More specifically, the results suggest that when an individual feels underemployed or overqualified, they are much less committed to the organizations in which they reside, and are much less likely to go above and beyond through organizational citizenship behaviours. Similarly, the results suggest that feelings of underemployment or overqualification greatly increase an employee's intention to leave, and slightly increase their likelihood of engaging in counterproductive workplace behaviours.

As an individual feels overqualified or inadequately employed, it is likely their perceptions of belonging or fit to a specific job-role decrease. Underemployment has been conceptualized within this person-job mismatch, with past literature suggesting this may manifest in undesirable outcomes. Inadequate use or dismissal of an employee's skills, expertise, experience, and abilities, is a classic form of person-job mismatch, and incongruencies of this nature are known to adversely affect employees' work behaviours (Si-Jeoung & Choi, 2018). Indeed, past literature investigating underemployment through a P-J lens has linked underemployment to workplace maladjustment, poorer work attitudes, and lower overall performance (Anderson & Winefield, 2011; Bolino & Feldman, 2000; Feldman, 2011), and these

perceived incongruences may, in part, be responsible for the observed relations between underemployment perceptions and organizational outcomes.

Desirable Organizational Outcomes. Perceptions of underemployment and overqualification were associated with low levels of affective organizational commitment, and fewer organizational citizenship behaviours, a bleak finding for organizations with underemployed workers. This is unfortunate, as organizational commitment and organizational citizenship behaviours can exert a beneficial influence within organizations, particularly when they become a norm or part of a corporate culture. As affective organizational commitment increases, perceptions of group cohesion increase, the quality of leader-member exchanges improve, and self- and supervisor-rated job performance is higher (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002; Vandenberghe, Bentein, & Stinglhamber, 2004). Organizations that foster affective organizational commitment may yield a competitive advantage financially, as group cohesion is positively associated with efficiency (Beal, Cohen, Burke, & Mclelland, 2003), ultimately resulting in greater productivity and use of resources.

Similarly, organizational citizenship behaviours have received a great deal of attention over the past several decades due to the meaningful impact they can have within organizations. The present study found that as perceptions of underemployment and/or perceived overqualification increase, the number of organizational citizenship behaviours participants reported engaging in decreased. This is unsurprising, as organizational citizenship behaviours go above-and-beyond occupational requirements, and underemployment perceptions may influence the intrinsic motivation required to engage in such. This finding is in accordance with prior literature examining this relationship (Chen 2010), and further demonstrates the potential value of lessening underemployment perceptions within a work force.

Collectively, the present research suggests that when a large portion of employees within an organization feel underemployed or overqualified, productivity and employee retention will be lessened at a financial cost to the organization. Additionally, when underemployment perceptions are high, employers may be at a disadvantage as they are not fully reaping the benefits that high levels of affective organizational commitment and OCBs often bring. This further demonstrates the utility of lessening underemployment perceptions, and recommendations for doing so are further discussed in the “Recommendations for Employers” section below.

Undesirable Organizational Outcomes. While encouraging employees to go above and beyond such as through organizational citizenship behaviours or high levels of organizational commitment is ideal, it is often negative organizational outcomes which prove to be most costly (such as turnover intention). Indeed, perhaps the most striking finding surfaced throughout the present study is the amount of variance subjective underemployment and perceived overqualification account for in turnover intention (39% collectively). Previous literature has found that an incongruence between an employee’s abilities and the demands set upon them is associated with turnover (Sylva, Mol, Hartog, & Dorenbosch, 2017), and such an incongruence is both an aspect of person-job fit theory, as well as an integral aspect of underemployment (e.g. lack of skill utilization). This is unfortunate, as the costs of voluntary turnover to an organization can be immense. Research estimates reveal that the cost of replacing an employee is typically between 15 to 30 percent of their annual salary (Boushey, & Glynn, 2012), and high levels of turnover can negatively impact organizational performance as well as organizational culture (Goss-Turner, 2010; Wynen, Dooren, Mattijs, & Deschamps, 2018)

Training costs, particularly for jobs mandating university credentials, often exceed \$2,000 CAD, and even once fully trained it may take employees several months to come up-to-speed with their experienced colleagues (Miller, 2014). In addition to the financial costs of turnover, employee retention and the accumulation of employer/industry-specific intellectual capital is crucial for businesses to remain competitive, and turnover entails the forfeiture of this intellectual capital. Employers routinely design initiatives targeted at reducing turnover, but often fail to take into account the influence that perceptions of underemployment and perceived overqualification may exert on employees' desires to leave.

In addition to positively influencing turnover intentions, underemployment and perceived overqualification were positively associated with counterproductive workplace behaviours, suggesting that as an employee feels increasingly underemployed or overqualified, the likelihood of them engaging in counterproductive behaviours is higher. While scant literature has investigated the relation between underemployment perceptions and counterproductive workplace behaviours, Bruursema, Kessler and Spector (2011) noted a strong relation between boredom at work and counterproductive workplace behaviours. Indeed, it is possible that those who are underemployed/overqualified are not using all of their skillset or formal credentials (lack of skill utilization, demands-abilities mismatch) and may feel bored at work.

Underemployment and Overqualification: The Role of Proactive Career Behaviours

While the present research found little evidence that proactive career behaviours act as a moderator between subjective underemployment and organizational outcomes, proactive career behaviours nonetheless accounted for significant portions of variance within subjective underemployment and perceived overqualification. Specifically, proactive career behaviours were negatively associated with perceptions of underemployment and overqualification.

Individuals who reported engaging in fewer proactive career behaviours, such as skill development and networking, were also more likely to view themselves as underemployed.

Engaging in proactive career behaviours has previously been found to result in higher perceptions of career success (Smale, et al., 2018), and the present study leads to a similar conclusion as engaging in proactive career behaviours was associated with lower perceptions of underemployment and overqualification. This may suggest that new university graduates may benefit from engaging in some or all of the four proactive career behaviours encompassed within the subscales.

Some of the specific proactive career behaviours assessed, seemed to exert a particularly strong influence on perceptions of underemployment and overqualification, as evidenced by the results of the regression analyses. Results showed that those who proactively network are less likely to perceive themselves as underemployed or overqualified, evidencing the utility of networking during the transition from university to career. Sensibly, the networking subscale was the most strongly related to turnover intention in comparison to any other proactive career behaviours, suggesting that those who network may more quickly learn of, or be favoured for, vacancies or alternate employment opportunities. This finding echoes previous literature investigating networking among recent graduates, which found that early-career networking is significantly associated with subjective and objective career success (Vos, Clippeleer, & Dewilde, 2009). University initiatives and career counsellors would be wise to continue to emphasize the utility and importance of professional networking in relation to underemployment as students prepare to transition to the workforce.

Additionally, the results evidence the utility of forecasting one's career advancement through discussing career goals and aspirations with both peers, as well as mentors or superiors.

Participants who reported frequently consulting with mentors or superiors about their career aspirations were significantly less likely to perceive themselves as underemployed or overqualified. Engaging in career consultation likely accompanies a long-standing interest in a given profession and other benefits this may entail, and also serves to network recent graduates with superiors in their fields of interest. Additionally, mentors and superiors may be providing useful information during consultation (as they are somewhat subject matter experts) and it may be the effective use of information gleaned in meetings which aids career consultation to protect against underemployment. The benefits of career forecasting were not limited to discussion with mentors or superiors, as similar discussions with peers (measured by the career planning subscale) was also negatively associated with perceived overqualification (but not subjective underemployment). It is worth noting, however, that frequent career planning and/or career consultation is likely related to an individual's long-standing interest or goal, and the eventual attainment of a coveted goal (e.g., becoming a school teacher, or doctor), may lessen perceptions of underemployment or perceived overqualification independent of the influence of proactive career behaviours.

Interestingly, proactive skill development, which focuses on acquiring skills one may not need now, but may need in a future position, was not significantly related to underemployment or perceived overqualification. Possible explanations for the observed finding may be an inadequate focus on temporally-relevant skill development (lessening one's opportunity to achieve higher positions), or the utility of proactive skill development may be compromised due to the increasingly spontaneous / planned happenstance nature new employment often entails.

Minimizing Subjective Underemployment: Some Recommendations for Employers

The findings suggest that there may be value in carefully designing job roles to minimize the experience of underemployment and/or perceived overqualification, and that it would likely prove beneficial to organizations as well as their employees. Minimizing the incongruence between the position an employee feels they ought to occupy, versus the position a company is offering, will improve an employee's perception of person-job fit, and may lead to better on-job performance. Some studies have shown that small changes in the design of a job can make substantial differences in the way employees experience the work, and subsequent perceived meaningfulness of the job. For example, a minor job-enrichment initiative among the custodial staff at Texas Instruments allowed janitors to complete their duties in any order they wished, and tasked them with purchasing their own supplies (still paid for by Texas Instruments). This minor change proved to be very successful, reducing turnover, increasing performance, and yielded financial gain (Weed, 1971).

The present research has many implications regarding job design, and how an employer may structure a position to minimize perceptions of underemployment and overqualification. An integral aspect of underemployment is compensation, and it is not surprising that compensation was negatively correlated with turnover intention. Previous research has linked dissatisfaction with pay to turnover intention, and it may prove profitable to compensate employees at least what is comparable to market average. Fair compensation is likely to deter turnover, and increase desirable organizational outcomes. Indeed, research by Mabaso and Diamini (2017) found a strong positive relation between compensation and job satisfaction, which is a known correlate of desirable organizational outcomes including employee retention (Biaison, 2014). Saving several thousand dollars on a salary, not including certain benefits, pursuing contract or

temporary positions, or more generally, structuring an opening in a lose/win fashion for an employee/employer, may prove to be costly long-term. While short-term financial benefits are gained, negative outcomes such as turnover (and the forfeiture of intellectual capital), lack of organizational commitment, and the opportunity for fewer internal hires/promotions may all prove costly.

An example demonstrating the utility of incurring slightly greater up-front costs for long-term organizational gain is the incorporation of heavily-subsidized daycare, free lunches, or onsite athletic facilities at tech-giant Google. While these upfront expenses may not seem to generate profit, Google ranks second among tech-giants in employee retention, minimizing training costs and the forfeiture of intellectual capital (Moreno, 2019). In addition, Google has been ranked as the most desirable employer world-wide for the past six years (Peterson, 2017) and their reputation as an excellent and caring employer yields several million employment applications annually, providing an advantage over competition with smaller applicant pools.

In further regard to job design is the importance of providing an accurate depiction of what a job entails. Job postings which embellish positive aspects and diminish negative aspects of a position may be perceived as adequate employment upon application, only to quickly elicit feelings of underemployment when undesirable aspects of a position become known (e.g., perhaps an unmentioned custodial duty). It may also signal to applicants with fitting credentials that unrealistically good jobs are available to them, perhaps increasing perceptions of underemployment if they find themselves unable to occupy such a position. Accordingly, another way employers may lessen perceptions of underemployment and perceived overqualification is through using a realistic job preview (RJP). Within a realistic job preview, an applicant is given an accurate view of what a job may entail, so they can assess the pros and

cons, and person-job fit, as accurately as possible prior to formally occupying a position. In doing so, the “honeymoon effect”, where a new opportunity seems too good to be true, as well as the “hangover effect”, when the stark realities of what a job entails may be not be as glamorous, can be avoided. Research has also shown that perceptions of honesty and realism (such as conveyed through RJs) result in employees being more committed to the organizations in which they reside, possibly improving organizational commitment (Meyer and Allen, 1997). More generally, the use of realistic job previews has been found to lessen turnover intention (Du & Shin, 2016), and increase job satisfaction (Bashir & Bashir, 2016) in a mutually beneficial fashion.

In addition, increasing autonomy among positions suitable for new graduates may lessen perceptions of underemployment or overqualification, as employees may feel they are more trusted and accountable for their actions. Indeed, a greater sense of independence and trust is likely to lessen perceptions of underemployment, and this comes at little cost to employers. While autonomy has been found to be beneficial throughout the entirety of a workforce, it has been found to be particularly valued among the younger cohort that recent graduates occupy (Gagne & Bhawe, 2010).

Of further benefit to organizations is the younger generation’s endorsement of continuous feedback. While decades ago, feedback may have been actively avoided (Moss & Sanchez, 2004), today’s young workers encourage routine feedback as an opportunity to build and grow within their careers (Myers & Sadaghiani, 2010). Indeed, continuous feedback may improve an employee’s on-job performance, resulting in quicker promotions and pay raises, which may ultimately result in lesser perceptions of underemployment and perceived

overqualification. Similar to increasing autonomy, providing feedback more routinely comes at little cost to employers, and may yield financial benefit down the road.

Limitations

There is a risk that participants recruited from Amazon Mechanical Turk may be disproportionately underemployed as they are pursuing supplementary sources of income. The present survey took an average of 16 minutes, 38 seconds, and participants were compensated \$0.60 USD, resulting in an estimated hourly wage of \$2.16 USD. This figure is below minimum wage in all of the states/province's participants were sampled from, and should be noted. However, despite participant's willingness to complete our survey cheaply, it is worth noting that participant's mean self-reported annual income is very near the United States average.

In addition, participants self-disclose whether they've recently graduated from a university, and this is not a verifiable fact. Accordingly, it is possible that some participants were untruthful in meeting this requirement. Finally, the average age of the participants was roughly 29 years old, which is notably higher than what one may expect when surveying recent graduates. Statistics Canada notes that the median age in which a student graduates from an undergraduate program is 24.8, approximately four years earlier than what is observed within our sample (Statistics Canada, 2007). Accordingly, there may be minor concerns regarding generalizability to a slightly-younger populace.

In addition, the majority of the population sampled would be considered millennials (born between 1970 and 1995), and the present findings may not generalize to entire workforces. However, millennials now comprise over 50% of the workforce, and this proportion will continue to go as time passes.

Furthermore, the use of cross-sectional experimental design entails several limitations

such as non-response bias, and also prohibits drawing causal inferences from the results. Accordingly, it is not possible to determine whether personal/organizational outcomes lead to underemployment, or if underemployment leads to personal/organizational outcomes. A recommendation to remedy this issue (longitudinal design) is discussed in greater detail below.

Finally, several of the hypothesis tests did not include control variables, and accordingly their associated effect sizes may be inflated. The effects of underemployment or perceived overqualification may lessen in magnitude when controlling for other possibly influential factors such as: age, gender, degree type (BA, BSc., etc.), degree length (Associates, Bachelors, graduate school or professional degree) among others.

Future Directions

Future research should investigate the relation between underemployment/perceived overqualification and physical health outcomes / health behaviours. While the present study assessed self-esteem, quality of life, and life satisfaction, these are predominately mental health outcomes and research investigating the relation between underemployment and physical health is scarce.

Additionally, future research investigating the relation between underemployment / perceived overqualification as it pertains to generational differences could further the relevant literature in the field. The work styles of millennial workers has notable differences in comparison to their parents' generation, and examining these relationships in different contexts may suggest beneficial changes employers may wish to pursue.

Finally, to combat the limitation of cross-sectional experimental design, future research examining underemployment and its associated outcomes may chose to do so longitudinally, in

which causal inferences can more readily be made, and the relation between underemployment perceptions and the economic cycle may be examined.

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Appendix A: Consulted Measures

Proactive Career Behavior Scale (Strauss et al., 2012)

1	2	3	4	5
Disagree	Disagree	Neither agree	Agree	Agree
Strongly	a little	nor disagree	a little	strongly

1. I am planning what I want to do in the next few years of my career.
2. I am thinking ahead to the next few years and plan what I need to do for my career.
3. I engage in career path planning.
4. I have recently begun to think more about what I would like to accomplish in my work during the next year or two.
5. I develop skills which may not be needed so much now, but in future positions.
6. I gain experience in a variety of areas to increase my knowledge and skills.
7. I develop knowledge and skill in tasks critical to my future work life.
8. I seek advice from my supervisor(s) or colleagues about additional training or experience I need in order to improve my future work prospects.
9. I initiate talks with my supervisor about training or work assignments I need to develop skills that will help my future work chances.
10. I make my supervisor aware of my work aspirations and goals.
11. I am building a network of contacts or friendships with colleagues to obtain information about how to do my work or to determine what is expected of me.
12. I am building a network of contacts or friendships to provide me with help or advice that will further my work chances.
13. I am building a network of colleagues I can call on for support

Adapted RYFF Wellbeing Scale (Ryff & Keyes, 1995)

Rate your agreement to each of the following using the scale provided below.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree

Environmental Mastery

1. In general, I feel I am in charge of the situation in which I live.
2. The demands of everyday life often get me down. (rs)
3. I do not fit very well with the people in the community around me. (rs)
4. I am quite good at managing the many responsibilities of my daily life.
5. I often feel overwhelmed by my responsibilities. (rs)
6. I generally do a good job of taking care of my personal finances and affairs.
7. I am good at juggling my time so that I can fit everything in that needs to be done.
8. I have difficulty arranging my life in a way that is satisfying to me. (rs)
9. I have been able to build a home and a lifestyle for myself that is much to my liking.

Personal Growth

1. I am not interested in activities that will expand my horizons. (rs)
2. I don't want to try new ways of doing things—my life is fine the way it is. (rs)
3. I think it is important to have new experiences that challenge how you think about yourself and the world.
4. When I think about it, I haven't really improved much as a person over the years. (rs)
5. I have a sense that I have developed a lot as a person over time.
6. I do not enjoy being in new situations that require me to change my old familiar ways of doing things. (rs)
7. For me, life has been a continuous process of learning, changing, and growth.
8. I gave up trying to make big improvements or changes in my life a long time ago. (rs)
9. There is truth to the saying that you can't teach an old dog new tricks. (rs)

Purpose in Life

1. I live one day at a time and don't really think about the future. (rs)
2. I tend to focus on the present, because the future always brings me problems. (rs)
3. My daily activities often seem trivial and unimportant to me. (rs)
4. I don't have a good sense of what it is that I am trying to accomplish in my life. (rs)

5. I used to set goals for myself, but that now seems a waste of time. (rs)
 6. I enjoy making plans for the future and working to make them a reality.
 7. I am an active person in carrying out the plans I set for myself.
 8. Some people wander aimlessly through life, but I am not one of them.
- I sometimes feel as if I've done all there is to do in life. (rs)

The Subjective Underemployment Scales (Allan, Tay, & Sterling, 2016)

Indicate how much the follow statements apply to you. For the following questions, consider your primary job where you spend the majority of your time.

- 1— Strongly disagree
- 2— Disagree
- 3— Slightly disagree
- 4— Neither agree nor disagree
- 5— Slightly agree
- 6— Agree
- 7— Strongly agree

Underpayment

- 1. My pay is less than other people with my qualifications.
- 2. I am paid less than those with similar credentials.
- 3. I am underpaid compared to those with my level of knowledge.
- 4. I earn less than people with similar skills.
- 5. I make less than others with my level of education.
- 6. My pay is lower than others with my level of experience.
- 7. I earn less than others with my level of ability.

Status discrepancy

- 1. My status at work is lower than I deserve.
- 2. I deserve a higher position in my company.
- 3. If it were up to me, my position at work would be higher.
- 4. My rank at work is less than it should be for someone with my ability.
- 5. I deserve a higher position at work given my level of education.
- 6. Given my credentials, I should have a higher position at work.

Hours discrepancy

For these questions, consider how many hours you work in your current job. If you have more than one job, consider the hours you work in all your jobs combined. Think of the amount of hours you work per week.

1. I need to find a job that allows me to work more hours.
2. I work fewer hours than I need.
3. I work too few hours.
4. I do not work enough hours.
5. I would work more hours if I could.
6. The number of hours I work is not enough.

Involuntary temporary work

1. My job is temporary, but I want a permanent position.
2. I work in temporary positions, but I would prefer not to.
3. I take short-term jobs because I have to.
4. I work in a temporary position, because I cannot find a permanent job.
5. I am forced to take temporary jobs.
6. I cannot find a permanent position.

Field

1. I am forced to work outside my desired field.
2. I had to take a job outside of my field.
3. I cannot get a job related to my education.
4. I am unable to work in a job related to my formal training.
5. I was compelled to take a job unrelated to my education.
6. I want to work in a different field, but there are no jobs available.

Poverty wage employment

1. My pay is not enough to live on.
2. The income from my job is not enough.
3. I barely earn enough to survive.
4. Despite efforts at work, my income is too small.
5. I do not earn enough, even though I have a job.

6. My job does not allow me to make a decent living

The scale of perceived overqualification (SPOQ) Item (Maynard, Joseph, & Maynard, 2006)

Participants provide ratings on a 7-point Likert scale from 1 = Strongly Disagree to 7 = Strongly Agree

1. My job requires less education than I have
2. The work experience that I have is not necessary to be successful on this job
3. I have job skills that are not required for this job
4. Someone with less education than myself could perform well on my job
5. My previous training is not being fully utilized on this job
6. I have a lot of knowledge that I do not need in order to do my job
7. My education level is above the education level required by my job
8. Someone with less work experience than myself could do my job just as well
9. I have more abilities than I need in order to do my job

Affective Commitment Scale Items (Meyer & Allen, 1990)

Participants provide ratings on a 7-point Likert scale from 1 = Strongly Disagree to 7 = Strongly Agree

1. I would be very happy to spend the rest of my career with this organization.* #
2. I enjoy discussing about my organization with people outside it.#
3. I really feel as if this organization's problems are my own.#
4. I think that I could easily become as attached to another organization as I am to this one.(R) #
5. I do not feel like 'part of the family' at my organization.(R) #
6. I do not feel 'emotionally attached' to this organization.(R) #
7. This organization has a great deal of personal meaning for me.#
8. I do not feel a 'strong' sense of belonging to my organization.(R) #

10-Item Short Version of the Counterproductive Work Behavior Checklist (CWB-C)
(Spector, Bauer, & Fox, 2010)

<p><i>How often have you done each of the following things on your present job?</i></p>	Never						
Once or twice							
		1	2	3	4	5	
1. Purposely wasted your employer's materials/supplies	1	2	3	4	5		
2. Complained about insignificant things at work	1	2	3	4	5		
3. Told people outside the job what a lousy place you work for	1	2	3	4	5		
4. Came to work late without permission	1	2	3	4	5		
5. Stayed home from work and said you were sick when you weren't	1	2	3	4	5		
6. Insulted someone about their job performance	1	2	3	4	5		
7. Made fun of someone's personal life	1	2	3	4	5		
8. Ignored someone at work	1	2	3	4	5		
9. Started an argument with someone at work	1	2	3	4	5		
10. Insulted or made fun of someone at work	1	2	3	4	5		

10-Item Short Version of the Organizational Citizenship Behavior Checklist (OCB-C)
(Spector, Bauer, & Fox, 2010)

<p><i>How often have you done each of the following things on your present job?</i></p>	Never		Once or twice		Once or twice/month
1. Took time to advise, coach, or mentor a co-worker.	1	2	3	4	5
2. Helped co-worker learn new skills or shared job knowledge.	1	2	3	4	5
3. Helped new employees get oriented to the job.	1	2	3	4	5
4. Lent a compassionate ear when someone had a work problem.	1	2	3	4	5
5. Offered suggestions to improve how work is done.	1	2	3	4	5
6. Helped a co-worker who had too much to do.	1	2	3	4	5
7. Volunteered for extra work assignments.	1	2	3	4	5
8. Worked weekends or other days off to complete a project or task.	1	2	3	4	5
9. Volunteered to attend meetings or work on committees on own time.	1	2	3	4	5
10. Gave up meal and other breaks to complete work.	1	2	3	4	5

The Six-Item Turnover Intentions Scale (Bothma, & Roodt, 2013)*Mean Ratings of Turnover Intention Statements (N = 228-231)*

Turnover intention statement ($\alpha = .88$)	<i>M</i>	<i>SD</i>
How often do you dream about getting another job that will better suit your personal needs?	2.94 ^a	1.44
How often are you frustrated when not given the opportunity at work to achieve your personal work-related goals?	2.77 ^a	1.32
How often have you considered leaving your job?	2.55 ^a	1.35
How likely are you to accept another job at the same compensation level should it be offered to you?	2.50 ^b	1.49
To what extent is your current job satisfying your personal needs?	2.27 ^c	1.08
How often do you look forward to another day at work?	2.15 ^d	1.10
Overall Mean	2.53	1.03

^aScale: 1 = Never to 5 = Always^bScale: 1 = Highly unlikely to 5 = Highly likely^cReverse coding used to compute item mean scale. Item mean scale 1 = To a very large extent to 5 = To no extent.^dReverse coding used to compute item mean scale. Item mean scale 1 = Always to 5 = Never.

Rosenberg Self Esteem scale (Rosenberg, 1965)

Please record the appropriate answer for each item, depending on whether you

Strongly agree, agree, disagree, or strongly disagree with it.

1 = Strongly agree

2 = Agree

3 = Disagree

4 = Strongly disagree

1. On the whole, I am satisfied with myself.
2. At times I think I am no good at all.
3. I feel that I have a number of good qualities.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I certainly feel useless at times.
7. I feel that I'm a person of worth.
8. I wish I could have more respect for myself.
9. All in all, I am inclined to think that I am a failure.
10. I take a positive attitude toward myself.

Satisfaction with Life (Diener, Emmons, Larsen, & Griffin, 1985)

1. In most ways, my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far, I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

Demographic Questions**Demographics:**

The following are demographic questions, designed to provide us with some basic information about the participants who take in our study.

Personal

What gender do you identify with?

☐ male ☐ female ☐ other

How old are you?

_____ years

What is your ethnicity? (Circle one)

Caucasian

Asian

Black

Hispanic

Indigenous

Mixed

Other

What is your relationship status? Please circle most formal that applies.

Single, dating, living together, common-law, engaged, married, separated/divorced

other: _____

(if in a relationship) How long have you been in a relationship with your partner (please specify in years and months (for example: 3 years, 2 months)?

How many children do you have?

Education

Please select the statement that best describes your first post-secondary program:

First Bachelor's Degree in Progress

First College Diploma in Progress

Completed First Bachelor's Degree

Completed First College Diploma

What did you study in school? (What was your academic Major?)

Using the following scale please select your current approximate grade point average (GPA) or your GPA at the time of graduation.

A+

A

A-

B+

B

B-

C+

C

C-

D+

D

D-

If you have completed an Undergraduate Bachelor's Degree, what degree did you earn?

BA

BComm

BSc

BEng

BSW

BSN

Other

What was the length of your Bachelor's Degree program?

2 Years (Associates degree)

3 Years (In Canada, known as a general Bachelor's degree)

4 Years (In Canada, known as an Honours Bachelor's degree)

Other

How many months has it been since you finished your first post-secondary degree/diploma?

Transition to Work and/or More Education

Have you been unemployed after graduating with university undergraduate degree/college diploma? (Do not include time spent in additional full-time studies)

Yes/No

If you have been unemployed since graduating from your first post-secondary program, what is the total number of months you have been unemployed and looking for work? (Do not include time spent in additional full-time studies, or time spent travelling)

NUMBER of months: _____

Did you enroll in a degree, certification, or professional program after graduating with your first undergraduate degree/diploma?

Yes/No

If yes

What type of additional program are you/did you enrolled in?

- ☐ College diploma
- ☐ Undergraduate degree
- ☐ Master's degree
- ☐ Ph.D., law or medicine degree

Please select level of progress in this program:

- ☐ In process
- ☐ Graduated
- ☐ Left before completion

Please select that best statement that best describes why you pursued additional postsecondary education:

- ☐ I had always planned to pursue more education because my desired job required it
- ☐ I pursued more education because I was unemployed
- ☐ I pursued more education because I was underemployed
- ☐ I pursued more education because I wanted a higher salary

Current Employment

Please select the statement that best describes your employment situation:

- Unemployed
- One Full-time Position
- One Full-time Position and One Part-time Position
- One Part-time Position
- Two Part-time Positions
- More Than Two Part-time Positions

If you indicated you had multiple part-time positions, unless otherwise stated, please complete the remainder of the questions referring to your primary job.

Your primary job for this survey is defined as the job that requires the highest level of education. If your jobs require equal levels of education then refer to the job that accounts for the largest part of your income.

What is your job title?

How did you find this job?

- Family
- Networking
- Started my own business
- Co-op or internship placement
- Job search agency
- Job posting
- Other

Where you working at this job while completing your undergraduate degree?

Yes/No

How long have you been working at your current job?

____ years ____ months

How much related work experience did you have before you beginning your current job?

____ years ____ months

In a typical week, how many hours a week do you work at your primary job?

- ____ less than 15 hours
- ____ 15 - 20 hours
- ____ 20 - 30 hours

- ☐ 30 - 40 hours
- ☐ 40 - 50 hours
- ☐ 50+ hours

In a typical week, how many hours a week do you work in total, between all your jobs?

- ☐ less than 15 hours
- ☐ 15 - 20 hours
- ☐ 20 - 30 hours
- ☐ 30 - 40 hours
- ☐ 40 - 50 hours
- ☐ 50+ hours

What is your industry?

Agriculture
Construction
Manufacturing
Transportation
Retail
Finance
Business
Professional Services
Entertainment
Public Administration
Government
Education
Health

What is your gross annual income from your primary job?

- ☐ Less than \$16 000
- ☐ \$16,000 – \$25,000
- ☐ \$26,000 – \$35,000
- ☐ \$36,000 – \$50,000
- ☐ \$51,000 – \$75,000
- ☐ \$76,000 – \$90,000

Appendix B: Informed Consent Form

Informed Consent Form

Present study: Recent Graduates' Experiences with Career Exploration, Planning, Decision-Making and Work

Please read the following information that describes the study and your rights as a participant. The purpose of an informed consent is to ensure that you understand the purpose of the study and the nature of your involvement and to help you determine whether you wish to participate in the study. The informed consent is also an understanding that you may withdraw at any point in the study without any penalty.

Purpose: This research will attempt to answer the following questions: How do recent university graduates conceive of the process of career preparation, planning and decision-making? How do perceptions of underemployment influence recent university graduates, as well as the organizations in which they reside?

Task requirements: The survey will take about 20 minutes to complete. To participate, you must have graduated with a Bachelor's degree from a university in North America within the last 5 years (2012 – present). If you meet the eligibility criteria and agree to complete the survey, you will be asked questions about your personal characteristics and preferences, your university education, things you have done to prepare for your current or future career, and your satisfaction with your career to this point.

QUALTRICS version: Compensation: Participants will be compensated by Qualtrics. Participants who withdraw from the study or leave some questions unanswered will still be eligible to receive the full compensation.

MTURK version: Compensation: All participants will receive \$0.75 upon entering the validation code in the window.

Potential risks/discomfort: There are no known serious risks associated with completing this survey. Some questions asking participants to reflect on their perceptions of employment, life satisfaction, or their career success may induce mild discomfort. If you feel any discomfort or distress at any point, you may choose to skip specific questions. The information at the end of the study provides contact information for support services that you may contact if you feel any discomfort and would like to speak with someone.

Right to withdraw: Your participation in this survey is voluntary and you have the right to end your participation at any time for any reason. If you choose to withdraw, simply skip all of the questions until the last page. After the last question, please select "quit." Given that your survey responses are anonymous, it will not be possible for you to withdraw your answers after the survey has been submitted.

Anonymity/Confidentiality: Your participation in this study is strictly confidential. Your IP address will not be recorded by the researchers. The data will be removed from the Qualtrics server by August 2018 and stored on a password-protected computer at Carleton University. The anonymized data will be kept for future reference and will be used in academic publications and presentations. Your data will be stored and protected by Carleton University, but may be disclosed via a court order or data breach.

Research personnel: The following people are involved in this study and may be contacted anytime if you have questions or concerns: Dr. Bernadette Campbell (Department of Psychology, Carleton University, Bernadette.Campbell@carleton.ca), Graduate Research Assistant Ryan Miller, ryanomiller@cmail.carleton.ca, Graduate Research Assistant Rene Guardado, reneguardado@cmail.carleton.ca

This study has received clearance by the Carleton University Research Ethics Board-B (Clearance # 106070). Should you have any ethical concerns with the study, please contact Dr. Andy Adler (Chair, Carleton University Research Ethics Board-B, (by phone at 613-520-2600 ext. 4085 or email at ethics@carleton.ca).

By selecting “Save and continue,” you consent to participate in the research study as described above.

Appendix C: Debriefing

Debriefing for the Study: Recent Graduates' Experiences with Career Exploration, Planning, Decision Making, and Work.

Thank you for your time! Please read this information to find out more about the study. Please take note of the URL for this webpage so that you can revisit it at a later time if you have questions or concerns.

What are we trying to learn in this research? The world of work, and what it means to have a 'career' is rapidly changing. The job landscape has become increasingly uncertain and ill-defined, especially for younger workers who often find themselves underemployed. The concept of a clearly defined career path is becoming less relevant and there is an increasing focus on *adaptability, flexibility, change, and self-definition*. In this climate, young people need to be active in the construction and interpretation of their work-related experiences and education.

Using a retrospective research design, we asked you to tell us about your current job, your vision of your future work self, proactive career behaviours you have engaged in, and your views of your current career success. We hope that the information you have provided will help us get a better sense of *how recent university graduates conceive of the process of career preparation, planning and decision-making*, and what may protect against, or increase the likelihood of, being underemployed.

Why is this important to scientists or the general public?

As the world is becoming increasingly modernized, it has led to a rise in the number of potential occupation paths. Increasingly, the onus is on the individual to play an active role in constructing and preparing for their career transitions. This research will help us to identify factors that have a strong impact on the successful transition from post-secondary education to the workforce. Ultimately, we hope that the results of this research will provide insights that can be used to help young adults to successfully navigate the challenges of career planning and decision-making.

This research could also help to inform educational services and interventions offered by post-secondary institutions as well as both career and personal counseling practices.

In addition, this study should help researchers, government agencies, and higher education systems to formulate, execute, and evaluate ways to improve career management skills and ways to minimize the career-employment gap for graduates.

Finally, this research may identify risk and protective factors of underemployment, which may have implications in vocational training and future research

Where can I learn more?

To learn more about what Canadian Universities are doing to prepare students for the future, perspectives on the value of liberal arts degrees, and the planned happenstance theory of careers, and its use in modern approaches to career counseling, please see:

<http://www.univcan.ca/universities/facts-and-stats/>

<http://www.univcan.ca/universities/facts-and-stats/value-liberal-arts-quick-facts/>
<http://web.stanford.edu/~jdk/HappenstanceLearningTheory2009.pdf>

<https://www.nacada.ksu.edu/Resources/Academic-Advising-Today/View-Articles/Planned-Happenstance-Preparing-Liberal-Arts-and-Social-Science-Students-to-Follow-Their-Hearts-to-Career-Success.aspx>

Is there anything I can do if I found filling out this survey to be emotionally upsetting?

Yes. If you feel any distress or anxiety after participating in this study, please feel free to contact a local crisis/distress centre or call a distress helpline:

Canada: 866-531-2600

U.S.A.: 800-273-8255

What if I have questions later?

If you have any remaining concerns, questions, or comments about this study, please feel free to contact Dr. Bernadette Campbell at the Department of Psychology, Carleton University, Bernadette.Campbell@carleton.ca, phone: 613-520-2600, ext. 4080, Graduate Research Assistant Ryan Miller, ryanomiller@cmail.carleton.ca, or Graduate Research Assistant Rene Guardado, reneguardado@cmail.carleton.ca

Should you have any ethical concerns about this study please contact Dr. Andy Adler (Chair, Carleton University Research Ethics Board - B (by phone at 613-520-2600 ext. 4085 or email at ethics@carleton.ca).

This study has received clearance by the Carleton University Research Ethics Board–B (Clearance #106070).

Again, thank you for participating in this research!

For maximum confidentiality, please close this window.