

Is Career Adaptability Only for the Privileged? Examining Career  
Barriers and Occupational Engagement as Predictors of Career  
Adaptability

By  
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Aaron D. Van Gorp  
M.S., University of Nebraska at Omaha, 2015  
B.S., Iowa State University, 2013

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Doctor of Philosophy.



Chair: Brian Cole, PhD



Arpita Ghosh, PhD



David Hansen, PhD

*Thomas S. Krieshok, Ph.D.*

Thomas Krieshok, PhD



David Ekerdt, PhD

Date Defended: 14 May 2020

The dissertation committee for Aaron D. Van Gorp certifies that this is the approved version of the following dissertation:

**Is Career Adaptability Only for the Privileged? Examining Career Barriers and Occupational Engagement as Predictors of Career Adaptability**

A handwritten signature in dark ink, reading "Brian P. Cole". The signature is written in a cursive style with a horizontal line underneath it.

Chair: Brian Cole, PhD

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## Abstract

Many vocational theories have proposed models for the development of career adaptability over time, explored the generalizable value of career adaptability as a group of individual traits, and the highlighted positive career outcomes that correlate with increased career adaptability. However, contemporary vocational theorists have pointed to the problematic overemphasis on individual interventions to foster volition, and concurrent lack of research examining systemic barriers to career decision making. Pending greater social change, the development of career adaptability is a goal of most modern vocational theories. Occupational engagement promotes experiential learning through immersion in activities that provide information about the world of work, which should foster more informed and adaptable career decisions regardless of station in life. Minimal or no research has previously explored the statistical relationship between occupational engagement and career adaptability, the ability of occupational engagement to predict variance in career adaptability levels, and whether this relationship would be significant after accounting for the influence of expected career barriers. The interaction effect of occupational engagement and expected career barriers was also examined. The current study used survey research data from 198 Americans between the ages of 18 and 40, recruited via Amazon's MTurk platform, to address these gaps in the empirical literature. Results indicated occupational engagement was positively correlated with career adaptability. The expectation of career barriers predicted a small, but significant amount of variance in career adaptability, and occupational engagement predicted a significant portion of career adaptability after accounting for the influence of career barriers. Finally, the negative relationship between expected career barriers and career adaptability was moderated by occupational engagement. Implications of these findings, limitations of the study, and directions for future research are discussed.

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## Chapter 1: Introduction

The history of vocational psychology and guidance has primarily focused on the ability to match people with careers – in an effort to increase the likelihood that both the individual and the occupation would benefit (Blustein, 2006). Beginning with Parsons's (1909) efforts to increase the employability of young adults in urban settings, the goal of optimal fit between person and job has been the pursuit of many vocational theories and interventions. For Parsons, the mechanism of finding optimal fit was the ability of the individual to employ "true reasoning," by learning about the world of work and their own personal abilities, and then making an informed decision about their ability to be successful in a job. Theories highlighting the match between person and environment have been commonly referred to as trait-factor theories. This approach to vocational guidance continues in Holland's (1959; 1997) career typology theory, which is the most widely recommended vocational intervention used by counseling psychologists, today. The trait-factor theories have value in exploring career decisions when an individual has the freedom of choice, and they can support people in seeking fulfilling work that is congruent with their interests. Unfortunately, in the real-world people often work just to survive, not self-actualize, and frequently hold employment that is less than optimal (Blustein, 1997; 2006).

In Parsons's day, careers were generally linear and stable. One could obtain a job and expect to hold that position for the remainder of their working life, with the exception being potentially working "up the ladder" of responsibility (Blustein, 2006). In such an environment, career decision making is a single event, usually when an individual transitions from school to the world of work (Savickas, 1997). In the modern world of work, this is not always the case. Advances in technology, increasing access to globalized labor pools, and the availability of a young and relatively cheap labor supply have contributed to increased rate of turnover in



employment (Blustein, 2005). As Bright and Pryor (2005) noted, the modern world of work is chaotic, and frequent career changes over the lifespan should be the expectation for any individual, not the exception. More than ever before, individuals are increasingly likely to experience layoffs and career transitions that are out of their control. Vocational research is needed to examine the lifespan of the career within the context of individuals' lives, leaving the previous assumptions of linearity.

Traditional developmental models of career theory, such as Super's (1980) life-span, life-space theory, originally paved the way for vocational research and guidance as relevant throughout the life. Following their lead, contemporary theories have begun to examine the transition dense trajectory of the modern career through the lifespan. Contemporary theories have also identified the importance of assessing contextual influences in people's lives, challenging ethnocentric views of individualism and autonomy reflected in the most widely used vocational theories. Gottfredson (1981) acknowledged barriers to career choice based on one's gender, including how choices are conscripted and can lead a person to compromise their goals in the face of deterring social obstacles. Career construction theory explores the meaning people ascribe to work roles, and how various work and life roles interact and can provide opportunity or restrict free career choices (Savickas, 1997). Social cognitive career theory (SCCT) examines how individuals develop interests and select abilities to foster and improve, through an understanding of the individual's beliefs and the social structures that deter or reinforce their beliefs (Lent, 2013; Lent, Brown, & Hackett; 2000). Psychology of working theory (PWT) addresses the systemic oppression and marginalization that keep individuals who work to survive from obtaining decent work, and highlights the blindness of the vocational research to the

forgotten half of the working population who do not have the privilege of choice in their career decisions (Blustein, 1997; 2001; 2006; Duffy, Blustein, Diemer, & Autin, 2016).

The introduction of career adaptability was a game-changer and has impacted most vocational theories since its introduction. Originally proposed by Super and Knasel (1981), career adaptability has become a central component of vocational theory, as researchers have agreed that increasing career adaptability should be correlated with a number of positive vocational behaviors and attitudes. Within career construction theory, career adaptability is a future oriented construct that engages during career transitions, improving one's ability to cope with challenges (Savickas, 1997). SCCT utilized career adaptability in understanding one's agency in career decisions, particularly in how adaptive career behaviors increase resilience to and positive functioning in the face of career change (Lent & Brown, 2013). PWT incorporated career adaptability as a mediator of career barriers to obtaining decent work, proposing that career adaptability could buffer against the negative influences of career barriers (Duffy, Blustein, et al., 2016). In each of these theories, career adaptability is a valued skill that improves an individual's ability to manage the unexpected changes of the modern world of work, and it values the influence of contextual variables in the lives of individuals.

In the current study, the trilateral model of adaptive career decision making (Krieshok, Black, & McKay, 2009) was used to organize and examine the development of career adaptability as an outcome of individual behaviors and contextual influences. The trilateral model includes reason, intuition, and occupational engagement. Integrating recent literature identifying complex and nuanced theories of cognition and decision making from interdisciplinary research, the trilateral model promotes a balance between reasoning efforts to process decisions with intuitive instinct about career decisions. Occupational engagement

supports this dual process by providing information about the world and the self through experiential learning, and it proposes to increase one's level of career adaptability. Examples of occupational engagement behaviors include informational interviews, networking, job shadowing, volunteering, and talking with others about work. Despite being a decision making model, the goal of the trilateral model is not necessarily to reach a specific career decision. Rather, the ideal goal is increasing an individual's career adaptability, which can be used across the lifespan in making adaptable decisions.

Departing from previous vocational theories, the trilateral model frames career adaptability as a continuously developing trait which is fostered by continuous occupational engagement behaviors. Thus, temporally, occupational engagement should precede the development of career adaptability. Further, occupational engagement should be an effective predictor of career adaptability. Few studies have examined this relationship with mixed findings, as previous literature has reported both positive and negative relationships between occupational engagement and career adaptability in unique populations (Ghosh & Fouad, 2018; Kim, Kim, & Lee, 2018).

Consequently, it is of interest to examine: if occupational engagement precedes career adaptability, then what precedes occupational engagement? In an effort to foster career adaptability as a general outcome of positive and proactive vocational behaviors, it would be of value to explore the variables that may constrict occupational engagement. Career barriers have been identified as restrictions that impeded an individual's career development (Urbanaviciute, Pociute, Kairys, & Liniauskaite, 2016). They are theoretically proposed as present throughout the lifespan and identifiable at a young age, which are often socialized into concepts of the world and the self (Eccles, Jacobs, & Harold, 1990, Diemer & Ali, 2009). They would presumably

precede (or at least be present as early as) occupational engagement behaviors. Consistent with the recent trends of vocational research, examining the contextual constraints to occupational engagement behaviors should provide insight to the ability of non-university populations to occupationally engage and develop career adaptability. A non-university participant sample was used in the current study as it aims to be more representative of the general American working population. Also, as modern vocational theories have noted, the study of university populations will inherently include the study of individuals of privileged status; those who can afford tuition, are able to obtain education loans, and can defer time working to invest in their education (Blustein, 2005; 2006). Thus, university populations may be less susceptible to career barriers, and the results of the study would less accurately represent the experience of the average working person in America.

Lastly, the nature of occupational engagement in the development of career adaptability is unclear. Minimal research exists regarding expected career barriers as a predictor of adaptability or the interaction of career barriers and occupational engagement. Subjective social status as a career barrier has been able to predict career adaptability (Autin, Douglass, Duffy, England, & Allan, 2017), however, it is unknown whether occupational engagement would have similarly declined or interacted as a buffer to the barrier's negative prediction of adaptability. A relationship between barriers and occupational engagement is tentatively supported. One study (Kim et al., 2018) found social support (considered as lack of a career barrier) significantly predicted occupational engagement behaviors, but the extent of further barriers in predicting engagement is also unknown.

To address these gaps in the empirical literature, the current study aimed to further explore the relationship of occupational engagement and career adaptability, by examining

relationship of Occupational Engagement Scale-Student scores (OES-S; Cox, Krieschok, Bjornsen, & Zumbo, 2015) and Career Futures Inventory-Revised scores (CFI-R; Rottinghaus, Buelow, Matyja, & Schneider, 2012). The CFI-R is a general measure of adaptable vocational attitudes and behaviors which has been proposed as an effective outcome measure of career adaptability. Additionally, this study explored how the expectation of career barriers, as measured by the Career Barriers Inventory-Revised (CBI-R; Swanson & Tokar, 1996) would predict career adaptability (CFI-R). Further, it was of interest to determine whether the presence of occupational engagement (OES-S), would predict a significant amount of variance in career adaptability scores after accounting for the expectation of career barriers (CBI-R). Lastly, the study examined the interaction effect of expected career barriers (CBI-R) and occupational engagement (OES-S) in predicting career adaptability (CFI-R). The following research questions and hypotheses were proposed.

### **Question I**

Does occupational engagement, as measured by the OES-S, correlate with career adaptability scores, as measured by the CFI-R in this sample?

### ***Hypothesis I***

Occupational engagement, as measured by the OES-S, will significantly positively correlate with career adaptability, as measured by the CFI-R.

### **Question II**

Does the expectation of encountering career barriers, as measured by the CBI-R, predict scores of career adaptability, as measured by the CFI-R?

***Hypothesis II***

Career barriers, as measured by the CBI-R, will predict a statistically significant portion of variance in career adaptability, as measured by the CFI-R. Specifically, increased expectation of career barriers will be associated with decreased career adaptability.

**Question III**

Does the presence of occupational engagement, as measured by the OES-S, predict scores of career adaptability, as measured by the CFI-R, after accounting for the expectation of career barriers, as measured by the CBI-R?

***Hypothesis III***

Occupational engagement, as measured by the OES-S, will predict a statistically significant portion of variance in career adaptability, as measured by the CFI-R, after accounting for variance predicted by career barriers, as measured by the CBI-R.

**Question IV**

Will expectation of career barriers, as measured by the CBI-R, and presence of occupational engagement, as measured by the OES-S, interact in predicting career adaptability scores, as measured by the CFI-R, in this sample?

***Hypothesis IV***

There will be a statistically significant interaction effect of career barriers, as measured by the CBI-R, and occupational engagement, as measured by the OES-S, in predicting career adaptability, as measured by the CFI-R. Specifically, occupational engagement will moderate the relationship between expected career barriers and career adaptability.

## Chapter 2: Literature Review

*“One must expect career counseling to be challenging, and one must take an approach that integrates both career and noncareer issues. There is no formula”. – Ebberwein, Krieshok, Ulven, & Prosser, 2004*

Careers are less linear than ever before, and while one’s occupation has traditionally been a stable and lifelong pursuit of increasing ability, knowledge, and maturity in a position, multiple job changes in the course of a career are now the norm (Cairo, Kritis, & Meyers, 1996; Ebberwein et al., & Prosser, 2004). Traditional career counseling theories reflect the first efforts of studying and improving career decision making, beginning with Parsons’s (1909) work which sought to support adolescents and young adults in choosing a career in which they could succeed. In response to the industrial revolution, choice in one’s career dramatically increased, and Parsons’s (1909) tripartite model of career decision making sought to assist young people in learning about the world of work, themselves, and how they might fit into various careers to increase the likelihood they would perform well (Cox, Bjornsen, Krieshok, & Liu, 2016).

Similar to the dramatic effects and the resulting organizational changes caused by the Industrial Revolution (increased factory production, surplus of job openings in relation to labor supply), modern technologies and the creation of related jobs to support advancement can make the task of choosing the right career intimidating in the face of constant change (Rottinghaus, Buelow, Matiyja, & Schneider, 2012). This is especially true when evaluating jobs that may not have existed even ten years ago as a career option. Organizations are increasingly mobile and the labor pool is large, thus organizations more frequently restructure, relocate, or replace the labor pool with minimal losses (Bright & Pryor, 2005). As such, a career with frequent changes,

whether driven by increased freedom of choice or by organizational changes that require change, should be anticipated for most populations (Ebberwein et al., 2004).

In the world of vocational research, career adaptability is the revolution. Thus, the review of vocational theory in this chapter will be separated by the introduction of career adaptability (Super & Knasel, 1981). As such, traditional theories will include those that characterize vocational research prior to the introduction of adaptability, and contemporary theories will identify those introduced after the adaptability arrived. In this way, the difference in structure of vocational theories will be markedly clear and reflect the importance of adaptability to the current vocational zeitgeist.

### **Traditional Vocational Theories**

Vocational psychology was founded on the study of individual differences. Around the turn of the 20th century, America was entering the Industrial Revolution, and young men in urban areas were no longer required to take the same occupation as their fathers, but (to some extent) could explore a growing list of potential occupation choices (Zytowski, 2001). As the means of production moved from agrarian and individualistic to factory-based mass production, laborers were required to move from generalized knowledge and skills sets appropriate to agricultural work to unique and specific skills that would support specialized work in a production line. In 1890, American YMCA's (Young Men's Christian Association) who were focused on the improvement of young men's spiritual and physical well-being, reported high enrollment in their industrial training classes, which reflected the growing demand for training in diversified careers. In these industrial courses, large numbers of people were able to gain training in skilled labors that they could use to their advantage in the job search (Savickas & Baker, 2005).



Notable researchers at Columbia University, including E. L. Thorndike, were consultants for the New York City YMCA. As the program services grew and expanded, administrators were able to offer vocational guidance programs for youths, which mostly consisted of job placement tasks (Savickas & Baker, 2005). In the early 1900s, Americans were interested in the pragmatic use of applied psychology, often turning to assessment techniques such as phrenology, the study of cranial features to assess personality traits, intelligence, strengths, and weaknesses, to learn about the self (Pickren & Rutherford, 2010). The YMCA expanded on this interest by utilizing the techniques of Phrenology, Physiognomy, and palm-reading to assist their members in making vocational decisions based on important character traits (Savickas & Baker, 2005). Additionally, the relationship between Columbia University and the YMCA proved to be crucial to the development of vocational psychology, as Columbia researcher James McKeen Cattell's research in intellectual differences and individual testing differences would spark Thorndike to begin the study of individuality and differences in the self (Savickas & Baker, 2005), and shorten the tenure of less empirically supported measures of vocational assessment.

### ***Person-Environment Fit Theory***

Frank Parsons, a progressive thinker, capitalized on the growing study of individual differences and opened one of the first formal career consulting center called The Vocation Bureau in Boston in 1908. His first goal was to disperse informational material about different industries, and how to obtain occupations or apprenticeships (Jones, 1994). He later asserted that individuals could learn about their own interests and skills, learn about specific careers that matched their interests, and make a career choice that would be the best fit between them. With structured assistance from a vocational professional, Parsons had introduced the concept of providing vocational guidance with a trait-and-factor (often also referred to as person-

environment fit) matching approach (Parsons, 1909). Most importantly for the field of vocational psychology, Parsons contextualized his decision making theory in terms of a profession, noting the need for qualified people to provide vocational guidance as a formal service (Savickas & Baker, 2005).

While working with donated funds to manage The Vocational Bureau, and often meeting in local YMCA's or civic houses, Parsons assembled a powerful team of notable figures to serve on his board of trustees, including college presidents, union presidents, private industry presidents, and the Boston YMCA Director to name a few (Zytowski, 2001). This executive committee focused on the development of vocational guidance for Boston's youth, noting the increase in demand of workers in industrial and factory jobs to meet the booming developmental needs of the city. The creation of this committee could be considered an accomplishment of its own towards the mainstream acceptance of vocational psychology, as its members had considerable influence throughout the area. Parsons unfortunately passed away shortly after starting The Vocation Bureau, but his classic work *Choosing a Vocation* would be published by his colleague and would solidify the establishment of vocational psychology as a widespread need in America (Jones, 1994). Within *Choosing a Vocation*, Parsons elaborated on his trait-and-factor approach to career guidance, where if an individual knew their traits (skills, talents, interests) and the factors of the job market (job requirements, job openings, likelihood of getting hired) they could make an effective decision about the type of occupation to pursue (Brown & Lent, 2013). He identified this process of obtaining up-to-date information and making the best decision on fit between the person and environment as "true reasoning." Once an individual obtained secure employment, the assumption was they would stay with that career for the remainder of their working lives (Savickas & Baker, 2005). Since, Parsons has been hailed as

the father of vocational psychology for his development of a person-environment fit theory which has continued to so significantly influence the practice of vocational guidance (Zytowski, 2001).

It is important to note that much of Parsons's work in Boston included Eastern European immigrants who had recently arrived and were seeking training and work through social programs such as the YMCA. Access to factory work was dictated by one's ability to work in a specialized setting, with training in specific production skills. While Parsons's assessment of individuals minimally expanded beyond interest and aptitude, systemic barriers to employment were certainly present and significantly impacted people's "choice" of work.

Brodkin (2000) highlighted the experiences of Eastern European Jewish immigrants in New York City during the early 20th century. "Jewish workers were frozen out of many occupations in which they were skilled, ... They did not become print, transport, or construction workers, not because they lacked the skills but because they were not allowed into the unions that controlled the right to practice them. For those unions, whiteness was an important requisite for membership." (p. 241). This description addresses the systemic occupational restrictions, including hiring discrimination and denial from entering work unions to learn additional trades, acted as a barrier to successful work based on ability and interests. Although programs like the YMCA were engaging and teaching industrial skills to these immigrants, they did not expressly address the systemic barriers that might face them in the real world.

Following Parsons, the field of vocational psychology continued to grow and gain slow traction with the public, with most assessment and matching efforts focusing on military occupation specialty assignments. Parsons's vocational guidance was just getting started in 1908, and before it could gain much attention, World War I began in 1914. This event

effectively drawing all able men who would have otherwise utilized vocational guidance services. The war was over in 1918, but before long the United States would feel the effects of The Great Depression, starting around 1929. In such tough economic times, necessity would control most vocational decision making, as many people struggled to feed their families. The economic depression would improve in the late 1930's, but again, before vocational guidance would have been able to gain traction, World War II began in 1945. Yet again, able men would have been called to duty, and women in the United States took up the labor force based on a need for production and survival rather than career fit. Due to these sociopolitical events, the person-environment fit theory of vocational guidance remained relatively unchanged.

As Herr and Shahnasarian (2001) effectively point out, there were no significant paradigm shifts in vocational theory until Holland presented his work in 1959. Fifty years after the publication of Parsons's *Choosing a Vocation*, Holland would expand upon Parsons's person-environment fit approach with the concept of congruence (Holland, 1959). This is not to say other relevant and influential theories were not developed and proposed, for example Donald Super (1957) did significant work in expanding the idea of career development being a fluid process through the lifespan (Brown & Lent, 2013). However, no other theory would be as frequently used as Parsons's or Holland's person-environment fit models (Luzzo & Day, 1999). However, Parsons's person-environment fit theory had created a new dominant theory, which went virtually unmodified for almost half a century, until Holland began to propose his additions of congruence and satisfaction to person-environment fit theories.

### ***Career Typology Theory***

Holland's career typology theory was based on Parsons's person-environment fit model and aimed to capitalize on identifying individual differences in people (Brown et al., 2013).

Building on the increasingly sophisticated assessment tools used in military placement, Holland began categorizing both people and careers among six personality types, including Realistic, Investigative, Artistic, Social, Enterprising, and Conventional (Holland, 1997). Holland proposed that these six typologies would adequately define most career interests, and he was able to demonstrate strong validity and reliability in this code system (Brown et al., 2013). Holland's (1997) typological theory also categorized work environments along those same six dimensions, by assessing the majority code type of the employees in that occupation (i.e. most teachers have Social as their primary Holland code interest type, so teaching is identified primarily as a Social occupation). Individuals ideally identify with three of the six possible codes, identifying the breadth of their work personality and interests in a career.

Holland used this typology system to encourage individuals to take ownership of their career search, but other than the addition of the six general code type themes (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional) Holland's model is quite similar to Parsons's emphasis on matching and "true reasoning" (Parsons, 1909). The other distinguishing factor of Holland's model was his introduction of the idea of congruence between work and the individual (Brown et al., 2013). The idea of congruence was that the best fit between an employee's interests and the tasks of the workplace would result in a highly satisfied and validated worker. Employees who enjoy their occupation would then tend to be more successful, earn more promotions, and work harder in their occupation (Holland, 1997).

Holland's emphasis on congruence, autonomy, and career satisfaction was consistent with the zeitgeist in which he developed the theory. In the late 1950's, the humanistic psychology movement began to gain attention among practitioners, including Abraham Maslow and Carl Rogers (Schneider, Pierson, & Bugental, 2014). Pickren and Rutherford (2010)

summarize the public American attitudes of the 1950's as a decade of forced conformity, in which the public lived in fear of another world war, and patriotism was demonstrated by being an avid consumer of American products and having a white picket fence around your suburban home (2010). Near the end of the decade, people were growing tired of being told what to do and how to think, a sentiment not well suited for the established prescriptive psychological therapies of the time such as psychoanalysis and behaviorism. Maslow and Rogers were instead developing client-centered theories and therapies, which is what the public was awaiting and primed for (Pickren & Rutherford, 2010). Similarly, vocational psychology was ready for Holland to offer a new focus of career guidance, tailored to the individual and designed to assist them in finding the highest potential satisfaction and congruence with their career choice.

Holland's typology theory has become one of the most researched vocational psychology theories and is currently the most recommended vocational theory by counseling psychology graduate students, post-graduation. To the current day, Holland's career typology is also the most common career theory used in vocational practice (Luzzo et al., 1999). Holland's theory has strong statistical evidence to back up his reliability and validity in assigning a typology, but his statistical support was established with a limited population of white, male, undergraduate students (Day, Rounds, & Swaney, 1998). Further, Holland acknowledged the presence of career barriers and external influences on an individual's level of choice, however, these external influences were considered a component of determining congruence between individual and career. Through social learning and social pressures, individuals develop vocational identities, which are solidified in their knowledge of the self and world of work (Holland, 1959). Career barriers would have been conceptualized as reducing the likelihood of success in a career, and restricted individuals from seeking work that may have been the optimal fit based on individual

variables (Urbanaviciute et al., 2016). Holland's approach and the broader matching approach, in this sense, acknowledged barriers but did not directly assess their influence on choice beyond creating an incongruent fit (Osipow, 1968), failing to address the full influence of contextual influences.

Notable oppositions to the typology theory of careers came from those who were able to identify the narrow generalizability to populations beyond undergraduate students (Schwartz, 1992). Researchers have called attention to the limits of using Holland's theory with diverse populations (Day et al., 1998; Diemer & Ali, 2009; Prediger & Vansickle, 1992). As Holland's code typology was normed on a white male sample, it can most accurately be used with white males who have the privilege of time and resources to engage in career exploration (Day, et al., 1998; Hansen, 1992; Schwartz, 1992). Any additional interpretation on diverse populations is limited in accuracy. Holland and Gottfredson (1992) dismissed the call for a more detailed and diverse assessment of typology by stating that any such assessment would become too cumbersome from its own size to be effective, and they noted that the effective vocational psychologist would consult their test manual for appropriate interpretation techniques for diverse populations. It should be noted that reliable norming standards across diverse populations for the measure did not exist at the time of their response.

It may be argued that the majority of clients in need of career exploration are college undergraduates, therefore the theory has utility with a sizeable population in need of vocational guidance (Luzzo & Day, 1999). The problem is that counseling psychologists are highly encouraged to learn Holland's theory of vocational choice and often do not retain training from other vocational theories. When counseling psychologists encounter career concerns in their

applied work, they utilize Holland's theory for diverse populations and problems related to career guidance when it may be inappropriate (Luzzo & Day, 1999).

### *Life-Span and Life-Space Theory*

A third traditional vocational theory, less used in practice than the previously discussed trait-factor theories but influential to the development of vocational psychology, is Super's life-span life-space developmental theory of career development (Super, 1953; 1980). As a developmental model, the life-span life-space theory identifies an expected structure of normal development in individuals, and the multiple life roles they enact both within work and outside of work. The model did increase the focus on noncareer issues in relationship to career guidance, examining the intersectionality of different roles and theaters (i.e. settings) as related to career decision making (Super, 1980). The developmental approach was also revolutionary in its efforts to examine the career trajectory over the lifespan, rather than focusing only on the transition into careers from adolescence. Super identified the career span as fluid and lifelong, and highlighted that vocational issues affect all populations regardless of status (Brown & Lent, 2013).

An initial component of Super's developmental vocational theory was the acquisition of career maturity, a construct that received significant attention in the empirical literature (Super, 1981). Consistent with interdisciplinary developmental models, age and maturity usually dictate an individual's progress through the model. Career maturity was intended to conceptualize key career dimensions of planfulness, exploration, information, decision making, and reality orientation (Herr, 1992) which would accumulate with age and experience. The initial construct was designed to examine the amount of work experience and therefore focusing on the firsthand knowledge available to a decision maker. Through adolescence, this concept varied relatively



well with age, as older kids usually learn more about the world of work as they age and talk with parents and teachers, and even begin to work part time. In Super's view, life roles will cycle in their salience to an individual. Throughout the cycling of life stages and roles, individuals will then reach decision points. Decision points are relatively predictable and serve as junctures for which individuals are able to define themselves. The value of experiential learning through career exploration is in preparation for a decision point.

However, two distinct problems arose with a measure of career maturity. First, an individual's age does not always vary with their work experience. This is especially true when applying the model to adult populations, in which Super and Knasel (1981) acknowledged the "heterogeneity of occupational experience to be found amongst adults" (p. 196) made differentiating their career maturity a difficult and unreliable task. In terms of age, career maturity as a measure of growth does not provide significant insight in comparisons of a 40-year-old and a 55-year-old in the same profession, who likely have many shared and exclusive experiences despite their age difference.

Secondly, the term "maturity" implies that individuals will reach an end of the development of their careers. Careers have been defined to include the totality of work done in one's life (Brown et al., 2013), and beyond Super's (1957; 1980) final stage of careers (titled "disengagement") we would still expect people to engage in vocational behaviors, such as personal care work even when market work is completed (Richardson, 2012). Therefore, there is no reason to believe that vocational behaviors would not continue to have a role in an individual's life beyond retirement or disengagement from classic market work, and should be worthy of inclusion in empirical efforts to understand how work affects people. In response to these concerns, Super and Knasel (1981) formally proposed the construct of career adaptability

be implemented as a measure of readiness to decision making, as a replacement for career maturity.

### **Contemporary Vocational Theories**

For the sake of this review, contemporary vocational theories will include those following the introduction of career adaptability. Three major theories will be reviewed; career construction theory, social cognitive career theory, and psychology of working theory. A review and discussion of the trilateral model of adaptive career decision making, which guides the structure of the current work, will follow. While additional theories have contributed to both vocational psychology and work on career adaptability in this time frame, the following three theories were selected for their significant influence in the field and their relationship to adaptability as beneficial skill for career decision makers. Then adaptability, as a construct, is noted within each theory review, and an in-depth review of career adaptability will follow later in this chapter.

#### ***Career Construction Theory***

Career construction theory was proposed by Savickas (1997; 2002; 2013) as a method of understanding the complexities of life in career and noncareer issues, by examining the meaning that individuals assign to their subjective careers. Savickas recognized the changing structure of career trajectories, understanding that in modern post-industrial work, the course of a career is likely to include multiple jobs for multiple employers. As such, a primary component of career construction theory is to foster adaptability to career transitions. As individuals build a narrative of their working lives, with increasing changes, being adaptable allows them to make sense of a narrative change. Savickas was a student of Super and described career construction theory as developmental, and a continuation of Super's life-span, life-space theory. The individual's

career narrative, similar to Super, must fit within a complex intersection of life roles and social expectations.

Building on a developmental model that addressed life roles and theaters (Super, 1980), career construction adapts a social constructivism model for interpreting reality and experience. In the world of work, he argued that individuals make sense of the chaotic and ever changing path of careers by assigning meaning to the work they do within a social context. He noted that previous developmental theories lack an emphasis on contextualism, rather focusing on discontinuous stage models of development or the demands of the workplace. Savickas (2002) built on the previous developmental models by asserting that “the individual’s own organization and coherence interact with contextual opportunities and constraints to produce development. While the context shapes the individual, the individual shapes the context.” (p. 158). Thus, an individual’s career development is not measured by age, but rather by their ability to adapt to change and redefine their constructions of work. As such, career construction theory was the first to integrate the construct of adaptability to a vocational theory (Autin, Douglass, Duffy, England, & Allan, 2017; Savickas, 1997).

Savickas’ career construction theory primarily addresses life themes, vocational personality, and career adaptability. Life themes, similar to Super’s life roles and theaters, addresses the contextual and subjective experience of the individual. An understanding of these factors, such as cultural context and subjective experiences, all contribute to the meaning assigned to occupational choices. This is consistent with the current work, which seeks to explore the contextual roles in career development, specifically how a socially constructed role can impose barriers to occupational engagement. Understanding life themes broadly allows career

counselors to understand occupational choices beyond interests, including how work provides an environment for development and how an individual believes they can contribute in work.

Vocational personality includes an understanding of an individual's interests, wants, values, and personality, and how these subjective descriptions are present in occupational choice. Self-concept is a closely related variable to vocational personality, as individuals who can define their vocational personality are more likely to have a defined self-image and be able to make career decisions consistent with their goals beyond their current interests. Not unlike the previous models of trait-factor or person-environment fit proposed by Parsons and Holland, a clear vocational personality is akin to having up-to-date knowledge of the self, which should increase the likelihood of optimal career decisions.

Career adaptability within career construction theory serves multiple purposes. First, it aligns with the previously valued readiness for career change. As Savickas wrote, career adaptability includes readiness for the predictable and unpredictable changes that present in the world of work (Savickas, 1997). For Savickas, career adaptability is composed of concern, control, curiosity, and confidence. This definition was later operationalized in an international population by in the Career Adapt-Abilities Scale (CAAS; Savickas and Porfeli, 2012), and again as a specific United States form (Porfeli & Savickas, 2012). Within these variations of the CAAS, a four-factor structure was found and validated through confirmatory factor analysis, giving support to a measure of adaptability within Savickas' definition of the construct.

Again, building on Super's developmental structure, career construction theory identifies transactional adaptations as events that both require adaptability and improve an individual's "adaptive fitness." Vocational personality and life themes integrate strengths and barriers, both subjective and contextual, to guide the development of adaptation (Savickas, 2002).

Transactional adaptations are cyclical in nature, and adaptation is strengthened after each transaction. Thus, developed adaptability is maturational with experience and correlate with career development. This is further evidenced by career construction theory's emphasis on career adaptability as a measure of readiness to career decisions, whereas other models have emphasized the importance of preparedness for career decisions (Krieshok et al., 2009; Savickas, 1997). Through this process of continually meeting changes and improving in adaptability, the individual exerts significant self-agency in defining and assigning meaning to the self and world of work.

### ***Social Cognitive Career Theory***

Social cognitive career theory, originally created by Lent, Brown, and Hackett (2000), is a conglomeration of psychological theory that examines how individuals make judgements about their career choices in pursuit of optimal outcomes. SCCT drew from social cognitive theory (Bandura, 2001; Lent; 2013), borrowing the emphasis on self-efficacy beliefs, outcome expectations, and personal goals to determine vocational behaviors. As Lent (2013) so eloquently described it; an individual must ask of themselves "Can I do this?" (p. 118), "If I do this, what will happen?" (p. 118), and "How much and how well do I want to do this?" (p. 119). The answers for any unique individual will reflect their previous learning experiences, successes and failures, values and interests, and constraints and resources in their social environments that make actions possible. According to SCCT, career decisions are made when people make judgements about their ability to do a task (self-efficacy) and what might happen (outcome expectations), should they do it. When individuals believe their self-efficacy to be high, or outcome expectations to be positive, they are more likely to engage in the behavior.

SCCT asserts these three variables allow an individual to assert their agency in career decisions, while acknowledging the barriers and constraints that realistically affect individual agency (Lent et al., 2000). For example, a person can seek situations and learning experiences that foster their self-efficacy and outcome expectations for a certain career area (e.g. take a class in wood working), however, limits of this agency must be recognized (e.g. are woodworking classes offered in the neighborhood? Are there price restrictions that inhibit people from enrolling? Does the family support the individual's interest in wood working?). SCCT includes four primary models; developing interests, making choices, the influence of outcomes, and satisfaction in work (Brown & Lent, 2013). For the sake of brevity, the review of SCCT will address the model's general approach to understanding vocational behavior, particularly the development of self-efficacy and outcome expectations as a cyclical behavior from social learning, contextual influences, and experience.

As one of the most influential vocational theories to examine social context in career behavior, SCCT examines how individuals and environments mutually influence one another (Brown & Lent, 2013). This reflects the social cognitive roots initially proposed by Bandura (2001), in which people have agency in their life choices, but the choices available must be understood within their environment.

SCCT highlights the contextual factors that lead an individual to develop self-efficacy beliefs about their ability to form interests and make career decisions, or more broadly, to complete vocational tasks. In understanding the development of these beliefs, one must assess the individual's unique life variables (what Super would identify as the life-space) such as gender, race and ethnicity, socioeconomic status, and individual and family values that shape an individual. Thus, the theory acknowledges the value of previous person-environment fit models

that highlight personal interests and encourage agency in behaviors. However, SCCT notes interests and values are developed within an individual's context and are pursued based on self-efficacy and outcome expectations. Individuals are more likely to develop interests in an area they believe they can perform well in and be rewarded for their strong performance with positive outcomes. Lent, Ireland, Penn, Morris, & Sappington (2017) referred to this as the crystallization of interests and noted that it is inherently restricted by social learning. Multiple studies have shown self-efficacy as a direct predictor of interests, satisfaction with a major choice, and intention to persist in a major (Lent et al., 2013). Self-efficacy also predicts positive outcomes in school tasks, such as directly predicting grades in mathematics (Hackett & Betz, 1989).

Between self-efficacy beliefs and outcome expectations, individuals develop and consistently reassess their interests and personal goals. They can assert their agency in achieving personal goals by taking steps to increase their self-efficacy or improve outcome expectations through exploration, additional training in a field, further education, or any activity that leads one to believe that their efforts are more likely to be successful. In this way the individual can impact their environment and affect their situation, asserting their personal agency. SCCT has also proposed that self-efficacy is highly related to individual agency in career decisions (Lent et al., 2000; 2017), and Lee et al. (2015) found that self-efficacy partially mediated the relationship between students' cognitive ability and their persistence in their major. This suggests that students need to believe they can be successful in order to persist in a vocational behavior, despite initial cognitive ability. Similarly, Lent et al. (2016) found that self-efficacy beliefs mediated the influence of social support on developing interests, indicating self-efficacy beliefs are necessary for social supports to promote engaging with interests.

SCCT also examines how the environment acts on the individual, and an understanding of how career barriers, available career supports, family and social group influences, and other contextual variables is key to understanding how an individual will assess their self-efficacy and outcome expectations (Brown & Lent, 2013). Expectations about how a vocational behavior (e.g. becoming interested in being a doctor) will be supported or hindered by the environment (e.g. does my culture accept female doctors? Will my family be proud of me for leaving home to attend medical school?) will undoubtedly affect the development of self-efficacy belief and outcome expectations. Work by Hackett (1981; 1995) proposed the negative effects of career barriers through environmental socialization on the self-efficacy of women in career decisions and non-traditional careers, which was later supported in many studies (Aronson, Quinn, & Spencer, 1998; Eccles, Jacobs, & Harold, 1990; Rivera, Chen, Flores, Blumberg, & Ponterotto, 2007) and evident in other populations as well (Steele & Aronson, 1995; Shapiro & Williams, 2012).

SCCT, as previously noted, understands the development of interest through both person and environment variables. While the influence of environment variables allows the examination of contextual variables beyond an individual's control, the influence of personal variables also addresses the individual variables beyond one's control, such as level of privilege. This reflects the influence of Gottfredson's (1981) theory of circumscription and compromise on SCCT. Gottfredson's model notes that life roles can circumscribe one's understanding of career choices, leading to a compromise and choosing the best of the circumscribed options, rather than the best fit overall. One's race, ethnicity, gender, disability status, and SES (and more, to be sure) all impact the self-efficacy one has in their career choices, and their expected outcomes for pursuing that choice (Diemer & Ali, 2009). Lent et al., (2000) wrote on the importance of



understanding race, ethnicity, gender, and other person variables as social constructions (Savickas, 2013) which then can be examined as social influencers on choice and decision making. In this way, it is more valuable to understand the influence of gender role socialization in career choices, than to try to understand the role of gender in career choices (Diemer & Ali, 2009).

Indeed, an adequate understanding of career barriers based on person input variables will require that the perception of the barrier be understood as a social construct. This reduces the potential of inaccurately concluding that barriers are due to demographics. More accurately, assessing the sociocultural meaning assigned to individual variables can illuminate the influence of culture in individual agency in career behavior. Put simply, knowing a career client is a woman or black does not tell you about their vocational behavior. Learning about the meaning placed on being a woman or being black (from their experience) in the world of work they inhabit does tell you about vocational behavior. Diemer and Ali (2009) articulated the importance on understanding the experience of social classism as perceived and internalized by individuals. As they noted, the perception of social classism and its relation to the self is of more value to understanding their perceived barriers, than is a measure of SES by family income, occupation, or other numerical measures of SES. In contrast to traditional expectations, Lent et al. (2005) found in one study that women perceived fewer social barriers and more social support than men in pursuing an engineering degree. Considering the significant research that would indicate the opposite, it would have been easy for Lent and colleagues to not assess the contextual barriers and supports in this population through “objective” measures, leading to incorrect inferences and conclusions about their subjective experiences. Consistent with the SCCT approach, the current research supports the use of a perceived barriers measure over

efforts to quantify privilege, and an emphasis on using the individual's perception of social influences rather than traditionally expected ones.

More recently, SCCT has proposed a career self-management model to highlight the previously noted but not underscored role of adaptability in SCCT (Lent et al., 2016).

Adaptability behaviors are consistent with SCCT's personal agency emphasis, and its cyclical nature of developing self-efficacy and outcome expectations through experience. Exploration has always been a vital component in SCCT to inform self-efficacy beliefs and outcome expectations. In SCCT, the adaptive individual continues to update their expectations through experience, and increased adaptability has been linked to increased self-efficacy in vocational outcomes, such as job search self-efficacy (Guan et al., 2013) and career decision making self-efficacy (Duffy, Douglass, & Autin, 2015).

Career self-management in SCCT specifically focuses on exploration efforts as a means of asserting adaptability and learning about the process by which individuals evaluate decisions and manage multiple life roles in work (Lent et al., 2017). While SCCT has always recognized the previous value of career and self-exploration, and the ability to make an optimal match decision consistent with Parsons and other traditional theorists, the SCCT tools are now being used to examine how people adapt and thrive in their career development, despite barriers (Lent et al., 2016). In this sense, adaptability is a skill that supports readiness for career change. The ideally adaptable individual is aware of their self-efficacy beliefs, outcome expectations, and personal goals, as developed from their learned experiences and personal and environmental influences. When career transitions cycle and return, the SCCT adaptable individual is aware of their expectations for behaviors and ready to assert their agency within their range of opportunities. Adaptive SCCT vocational behaviors are consistent with traditional matching

theory, with an awareness of the influences beyond individual control, and seek to find optimal subjective outcomes.

### *Psychology of Working Theory*

The psychology of working perspective was originally proposed by Blustein (1997, 2001; 2006; Blustein, Kenna, Gill, & DeVoy, 2008) and focused on the unequal dispersion of privilege among people, and the lack of acknowledgement of structural and systemic barriers in vocational theory (Diemer & Ali, 2010). Blustein (1997; 2001; 2006) first argued that vocational theory heavily relied on the assumption that career choice was a freedom extended to all, when in reality, most individuals face significant barriers to finding work, let alone exerting their choice among multiple career options (which Blustein conceptualized as volition). Blustein (2006) wrote on the psychology of working framework (PWF), noting that traditional matching and person-environment fit theories were restricted from application to most people in the world, and at best account for a small proportion of factors that lead to employment. Blustein, Kenna, Gill, and DeVoy (2008) argued that person-environment fit models of career decision making are still useful, though they are not generalizable to the majority of the population who must work to survive rather than to express their interests (Blustein, McWhirter, & Perry, 2005). Instead, the goal of PWF is to understand how people obtain decent work, the outcomes of having decent work, and how volition and privilege affect seeking decent work (Blustein, 2001; 2006; 2013).

Work volition is defined as “one's perceived freedom of future work choice despite constraints” (p. 47; Duffy, Douglass, et al., 2015), and is conceptualized as a predictor of obtaining decent work (Duffy, Blustein, et al., 2016). In the modern world, the majority of career decisions are made by people with little or no work volition, and traditional goals of self-actualized and highly meaningful work are just not the norm for most people (Blustein et al.,

2005). Rather, the PWF proposed general goals of examining the reciprocal balance of one's nonwork contextual factors and the experience of work, addressing the role of work in mental health and how work can provide fulfillment and social connection, identifying and addressing the barriers to work volition through oppression and marginalization that exist in the sociocultural settings where people live and work, increasing the utility of career counseling to populations who work to survive rather than to self-actualize, and understanding how individuals obtain decent work (Blustein, 2006; Blustein et al., 2013; Blustein, Olle, Connors-Kellgren, & Diamonti, 2016; Duffy, Blustein et al., 2016).

The PWF responds to critiques of traditional vocational theories, primarily being restricted to privileged populations, as a call to action. PWF found agreement with the deconstructions of traditional vocational theory and acknowledged of the lack of empirical literature on career development of underprivileged populations (see Blustein, 2013 for review of specific critical deconstructions of traditional vocational theory). Specifically, the majority of vocational research examined how people within work behaved, and how people who had work volition made career choices (Blustein, 2013; Blustein et al., 2008). PWF instead determined to study "working" rather than "careers" (Richardson, 1993), separating the terms "work" and "career" and removing the assumption that most individuals have the freedom of volition in work decisions to plan their career trajectories.

To further understand the experiences of less-advantaged populations, PWF focuses on the multiple personal variables that directly and indirectly influence how people engage with work. Increasing awareness of unique intersectional life roles can facilitate an awareness of the systemic barriers that constrain people. More recent research has begun to examine the oppressive nature of marginalization in career behaviors, finding marginalization based on

individual variables such as gender, race, ethnicity, ability, and others to be correlated with negative career outcomes (Autin et al., 2017; Duffy, Autin, Diemer, & Bott, 2015; Duffy, Blustein, et al., 2016). In this view, the role of career barriers, volition, and career privilege are central to understanding how people function in the world of work.

In addition to personal variables, PWF addresses the socioeconomic systems that serve to oppress and marginalize people. PWF was not the first vocational theory to emphasize the role of social context in vocational behavior. As previously mentioned, both SCCT and career construction theory valued an understanding of how social and cultural influences shape career goals, expectations, meaning assigned to work, and individual worldviews (Lent et al., 2000; Savickas, 1997). However, PWF is the first to examine oppressive contextual factors, such as the career constraints of individuals of lower social class status, as a core component of a vocational development theory (Diemer & Ali, 2009), giving them equal importance as personal variables in work behavior.

Assessing an individual's context, which built upon the work of earlier theories who integrated life roles (Super, 1980) and noncareer issues in career guidance, was referred to as the context-rich perspective (Blustein, 1997). Through the context-rich lens, PWF challenges the assumption that personal variables should be considered as proximal influences on vocational behaviors, while social and cultural context influences should be distal (Duffy et al., 2016). Much of the previous research that had examined the influence of contextual supports and barriers in careers had addressed the mediating or moderating distal effects of contextual variables on the proximal relationship of individual variables to career outcomes (Fouad et al., 2010). Duffy, Blustein, and colleagues (2016) commented on this pattern as a likely reflection of individualistic western culture, in which individual agency is often valued above all else. It also

likely reflects the experience of the subset of western society that comprises the participant pool accessed by psychological researchers; the white middle class (Blustein et al., 2005). While more recent theories have broadened the scope of vocational research by examining contextual influences, both traditional and contemporary vocational theories have weighted the importance of agency and internal locus of control in career decision making (Gushue & Whitson, 2006).

Blustein (1997) also introduced the goal of obtaining decent work and highlighted the importance of vocational theory that acknowledged lack of privilege and opportunity as a restraint to career exploration. Within the PWF, intervention efforts based on optimal career decision making are minimally useful to the majority of individual's working lives (Blustein et al., 2005). More consistent with the chaotic and career transition frequent marketplace, PWF identifies a primary goal of career intervention should be assessing one's ability to attain decent work (Blustein et al., 2016; Bright & Pryor, 2005; Duffy, Blustein, et al., 2016). Decent work was based on the International Labor Organization's efforts to standardize an objective and inclusive description of people's rights to work. Decent work is defined as "(a) physical and interpersonally safe working conditions (e.g., absent of physical, mental, or emotional abuse), (b) hours that allow for free time and adequate rest, (c) organizational values that complement family and social values, (d) adequate compensation, and (e) access to adequate health care" (p. 130; Duffy, Blustein, et al., 2016). While career decision making support can be helpful to those who have the privilege of work volition, assessing the personal and contextual factors that affect obtaining decent work would be more statistically applicable to the general population, and could guide broadly applicable and relevant counseling practices.

### *Difference between PWF and PWT*

The PWF was proposed as a model for understanding barriers to decent work for underprivileged populations. However, it was less a theory and more a perspective for organizing research and applied efforts to increase inclusion of work and nonwork issues of less privileged populations (Blustein, 2013). In an effort to operationalize and quantify the PWF to increase its empirical support, the psychology of working theory (PWT) was proposed as a testable method of examining how people obtain decent work (Autin et al., 2017). Specifically, PWT is interested in the predictors of obtaining decent work, moderators of those predictors, and outcomes of having decent work.

Duffy, Blustein, Diemer, and Autin (2016) organized a visual diagram of the theoretical model of PWT (p. 129) delineating both theoretically and empirically established pathways to obtaining decent work and its outcomes, which is highly recommended. The authors first introduced career adaptability into the PWT in this article. Career adaptability was not an original core component of the PWF (Blustein, 2006), however it was proposed as a predictor of decent work based on research that has linked career adaptability attitudes to higher social status and reduced marginalization. As such, adaptability is considered a psychological construct grounded in personal experiences that is self-regulatory and develops with time (Creed, Fallon, & Hood, 2009; Savickas, 1997). Temporally, career adaptability is expected to be negatively related to perception of career barriers, and to act as a mediator of barriers and marginalization in predicting the attainment of decent work (Duffy, Blustein, et al., 2016). In other words, increased barriers (which are present from the beginning of life) are expected to negatively predict career adaptability (which is developed over time and through experiences). However, increased adaptability may also help mitigate the negative effects of barriers in obtaining decent

work, acting as an attitudinal buffer to the negative influence of perceived barriers. Thus, exploring the development and barriers to career adaptability is of high value, and supports the goals of the current work.

This directionality in obtaining decent work has been supported by negative correlations between Savickas' operationalization of career adaptability to career barriers (Soresi, Nota, & Ferrari, 2012), negative correlations between additional measures of career adaptability and barriers (Rottinghaus et al., 2012), career adaptability as developed over time through positive experiences (Ebberwein et al., 2004; Kanten, Kanten, & Ülker, 2017; Koen, Klehe, & Van Vianen, 2012), career adaptability as a mediator of contextual factors and predicting career outcomes (Neureiter & Traut-Mattausch, 2017; Nilforooshan & Salimi, 2016), and career adaptability as a predictor of positive vocational behaviors (Creed et al., 2009; Duffy, Douglass, et al., 2015; Hirschi, 2009). Understanding how career barriers predict the unfolding of careers over time (Autin et al., 2017), by restricting access to decent work or mediating other predictors of decent work (Duffy, Blustein, et al., 2016), falls centrally within the PWT's context-rich research approach (Blustein, 1997). The current study aims to extend that line of research, adding to the empirical literature on the role of barriers and volition in career adaptability through engagement.

### **Problems with Previous Theories**

Vocational researchers (Black, 2006; Krieshok 1998; Krieshok et al., 2009) have identified the pervasive use of the traditional matching model in applied vocational settings, and the tendency of vocational counselors to continue to emphasize a singular career decision that can be identified through introspection and reasoning. Despite the introduction of contemporary vocational theories that support a more holistic examination of an individual's contextual



situation, intersectionality of life domains, and noncareer issues (Blustein, 2005; Ebberwein et al., 2004), the continued reliance on the previous vocational paradigm can seem perplexing.

However, this reluctance to part from “the old ways” is not without reason.

Traditional matching theories of career counseling have benefits for the counselor, and in high volume client settings, can have benefits for the administration. For example, matching models are easily implemented, requiring brief psychoeducation on the matching process and the requirements for exploring the world and the self. As compared to a processing focused psychotherapy session, which would spend considerable time gathering contextual information, the traditional matching theories in career guidance often do not assess much further than self-reported interests.

For example, many universities maintain career centers, which emphasize administering interest inventories and teaching visitors how to search for career information on the internet. Their continued use of the traditional matching model supports a notion in the public and among non-vocational counseling psychologists that matching theories are sufficient, despite the empirical evidence indicating the opposite (Blustein, 2006; Krieshok, 1998; Krieshok et al., 2009; Lent et al., 2000). These centers, which often serve as the first point of contact for students who would benefit from more structured vocational guidance, are limited in depth of assessment and minimally address the influence of relevant factors to the choice of a career, such as family influence, career barriers, and the influence of demographic variables like race or gender. Whether explicitly stated or not, an underlying assumption of working with university students is they are of a privileged status and highly autonomous (Blustein, 2005), with an ability to focus on a career search dictated primarily by their interests. However, this significantly undermines the complexity and depth of a person’s personal and contextual experiences, despite their level of

privilege, and ignores research that identifies the importance of contextual variables in career decision making (Aronson, 2008; Blustein, 2005; Diemer & Ali, 2009). Furthermore, it continues to support the matching model in which career interests carry the weight of the search process, restricting the development and use of broader theories that can be generalized to adult populations. As Eberwein et al. (2004) noted, the approach to career counseling should be to understand both career and contextual (noncareer) issues, and a prescribed formula like that of the traditional match theories is all but sufficient.

### **Adult Vocational Guidance**

In addition to the limits of traditional matching theories in college populations, an emphasis on a singular static career decision in vocational guidance is not easily generalizable to the majority of adult workers. It is inconsistent with the current world of work, in which career decisions are made constantly, and career goals and behaviors are monitored and updated with daily experiences (Lent, 2013; Krieshok et al., 2009). Recent efforts to expand the literature on career decisions of adult populations have begun to focus on the contextual experiences that influence their ability to make career decisions, the restrictions they have in career choices, and their ability to adapt to increasingly insecure employment. However, this research has been limited due to the more easily accessed and researched university student populations (Blustein, 2001; Blustein et al., 2008; 2016). As Blustein (1997; 2001; 2006; 2013) noted, the vast majority of people who are working or want to work do so as a means of survival. The field of vocational psychology is in need of empirical examination of those who do not have the privilege of time and resources to evaluate a number of career options.

Removing or reversing the influence of systemic barriers to vocational choice and decision making requires system-level change (Blustein, 2006). These changes are directed at

policy, law, and societal norms and expectations that serve to oppress people. Given the significance of this task and its necessary time requirements, it is of value to address the current functioning of adults in career behaviors, and support efforts to improve functioning at an individual level. Previous researchers have agreed that increasing one's career adaptability, including their readiness to navigate career change and ability to do so with minimal negative outcomes, appears to be an appropriate starting point (Blustein, 1997). In particular, research has identified experiential learning through occupational engagement and career exploration efforts seem to support the development of career adaptability throughout the lifespan (Krieshok et al., 2009). As Blustein (1997) noted, career exploration or adaptability is by no means the solution to the unique and significant career concerns faced by the majority of the population; however, it seems to be helpful, and currently the best option for assisting under privileged adult populations.

Consistent with that line of research, the current study aims to increase the perception of barriers experienced in adult populations. Whereas previous research has examined the negative influence of career barriers in vocational outcomes, the problem remains that much of the focus has been on college student populations. Further, the perception of barriers as a restriction to occupational engagement behaviors has not been examined in adults, nor has the role of occupational engagement in mediating the influence of career barriers on development of career adaptability. The current study aims to fill this gap in the literature.

### **Trilateral Model of Adaptive Career Decision Making**

The traditional and most popular method of career counseling relies on finding the ideal match between person and career, based on a rational evaluation of both person and job, and the likelihood of a good "fit" between them (Parsons, 1909). Parsons (1909) asserted that if people

could understand the intricacies of their potential careers, and accurately understand their own interests, beliefs, and values, they would be able to make an optimal career choice. This emphasis on the optimal match has historically been helpful, as an informed decision maker is able to realistically compare their career options (Savickas, 2000), and choose a career worth devoting such a large portion of their life's time and effort. However, as Krieshok, Black, and McKay (2009) have noted, the stable and linear career trajectories that support the matching model are not representative of the modern world of work, which does not provide the safety in assuming that fit will equal long-term employment. In attempt to congregate the valuable established research on career decision making, modern research's increasingly nuanced understanding of decision making and vocational behaviors outside of conscious evaluation and control, and shifting goals of the field towards career adaptability, the trilateral model of adaptive career decision making was proposed (Krieshok et al., 2009).

### ***Reason and Intuition in Decision Making***

In person-environment fit models, a foundational assumption includes people's ability to use rational decision making skills to objectively determine their optimal career choice, which Parsons termed "true reasoning" (Parsons, 1909). In evaluating career decisions, this translates to a "by the numbers" approach; the best career choice is the one that wins on paper. Research in judgement and decision making has challenged this notion, identifying inherent flaws and biases which influence cognitive processes and undermine true rationality in decision making (Ariely, 2008; Kahneman & Klein, 2009; Krieshok, 1998; Krieshok et al., 2009; Lieberman, 2003; Tversky & Kahneman, 1973; 1974; 1984). Relying on incorrect or outdated information, errors in reasoning, using inaccurate stereotypes, or making assumptions can all impact decision making, and these examples of "poor reasoning" demonstrate that people are not reliably

accurate processors of information. In fact, research suggests humans are minimally aware of the cognitive processes by which they attend to information (Kahneman, 2003; Nesbitt & Wilson, 1997). Furthermore, research on cognitive processing, developed after many of the traditional vocational theories were established, indicates the bulk of information the human brain processes happens at a nonconscious level, restricted from any efforts towards reasoning (Krieshok, 1998). In the traditional matching models of vocational guidance, these concerns added to “misfit” between self and occupation, and likely drove people away from potentially good career choices (Urbanaviciute et al., 2016).

Recently, empirical literature across disciplines has adopted a dual processing framework for cognition, and an empirically supported approach to decision making includes both conscious and non-conscious processes as significant contributors to all decisions (Epstein, 1994; Krieshok et al., 2009; Lieberman, 2003; Nisbett & Wilson, 1977). Kahneman’s (2003) conceptualization of intuition (system 1) and reasoning (system 2) supports the dualistic yet cooperative nature in which people rely on their “gut” feelings and their current knowledge to make decisions based on the information available to them at a particular moment. The conscious system contains language and attempts to translate the information exchange between intuition and behaviors. Just as it would be difficult to describe the feeling of “butterflies in your stomach” to someone who has never experienced them, the feeling still exists and affects our behaviors (for instance, I might avoid public speaking because of them), though we are limited in our conscious ability to fully express those same feelings. As such, the two systems of intuition and reasoning work in tandem, with nonconscious processes containing the majority of the information and influencing decision making; and the conscious system doing its best to assign language to the intuitive feelings (Krieshok et al., 2009). Contextualized within career decision making, disconnect

between intuitive and reasoning processes (biases influencing the interpretation) can lead to individuals seeking careers with which they do not congruently match. Intuitively, a career choice might “feel” like a fit, but inaccurate or biasing cognitive information (such as societal norms or negative career stereotypes) might remove it from the list of possibilities before it was ever explored.

Inherent biases and flaws exist in both cognitive and intuitive systems, and Kahneman’s (2003) work details the heuristics that can create decision making errors or lead to sub-optimal outcomes, much of which can be easily contextualized in career decision making examples. In career decision making specifically, a common error includes overreliance placed on either system without valuing the other, particularly when individuals focus on System 2 reasoning processes over their intuitive System 1 “likes.” This is consistent with Krieshok’s (1998) anti-introspectivist argument, where he noted the flaws of hyperrational processing over engaging the intuitive and emotional information one holds about a career decision.

It is important to acknowledge how reason and intuition both affect the development of one’s world view, previously described by Krieshok et al. (2009) and others (Epstein, 1994; London, 1997) as schematas or personal theories about the world and self. Schematas are personal belief systems that serve to categorize and streamline the process of understanding the world and making decisions. By serving as a structure for expectations, schematas could be considered mental shortcuts that allow assumptions to be made, based on current knowledge. Thus, they act as filters for the information one attends to when experiencing an event, and self-schematas (Markus, 1977) will regulate the information one can draw upon when making a future oriented decision (e.g. I love spicy food, therefore I am more likely to think the hot wings on the menu will be a good choice, even if I have never tried them).

However, schematas are prey to the same cognitive biases that affect individual cognitions, and worse, over time can be constructed to contain many inaccuracies that lead to sub-optimal decisions (e.g. I always get hot wings when watching football with my friends, so even though they gave me terrible indigestion last Sunday, I will order them again). Vocational research has long addressed schemata in understanding how individuals move through the world of work (Blustein, 2005; Krieshok et al., 2009), as they reflect social learning and previous experience (Markus, 1977). Traditional vocational theorists, such as Holland (1997), also notably also addressed the importance of world schematas in how individuals determined the fit between the self and the career. However, recent and developing research on the process of cognition (Kahneman, 2009) supports a more nuanced understanding of less accessible but highly salient intuitive influences in the cognitive and verbal attributions made by individuals about careers.

### *Structure of the Trilateral Model*

The trilateral model of adaptive career decision making (Krieshok et al., 2009) delineates a method by which decision makers can make optimal and adaptive career choices, based on factors of preparedness, information gathered through experience, knowledge of the self, knowledge of the world of work, and a critical evaluation of decision making biases that affect the hyper-rational decision maker. The model's core three components include: (1) occupational engagement, (2) intuitive decision making, and (3) rational decision making, which together seek to integrate contemporary research on the processes and pitfalls of decision making, while increasing one's ability to be adaptable to career changes (Cox et al., 2015; Krieshok et al., 2009). Engagement is the driving component of the model and consists of two subcategories; (a) exploration activities, and (b) enrichment activities, which accrue a fund of career and self-

knowledge that support positive and empirically sound decision making strategies (Lieberman, 2003; Klein, 2008).

The model builds on the traditional decision making paradigm in Kuhnian fashion (Kuhn, 2012), by recognizing the value of traditional career theory in exploring career choices and the necessity of career decisions in life, with the addition that decision makers are self-critical, willing to be wrong about their previous knowledge and choices, and understand that career decisions will reliably occur throughout the lifespan and will require adaptability to successfully navigate (Krieshok et al., 2009). It is inherently a decision making model, which lends itself well to privileged populations that have the freedom of choice in career decision. However, it is also a lifespan approach that emphasizes the value of adaptive career decisions beyond those required when a career transition is imminent, and it can be applied to the daily career decisions beyond choosing a college major or career field.

### ***The Value of “Trilateralization”***

A brief review of the three components of the trilateral model (for brevity, the “Trilateral Model of Adaptive Career Decision Making” will be referred to as “the trilateral model” for the remainder of this work), as well as their differentiation from previous models, will help to acknowledge the additive value of the model to current vocational research. To first address the model’s focus on the decision making processes, Krieshok et al. (2009) noted that career decision making based on reasoning is limited in value, as humans tend to be biased decision makers (Tversky & Kahneman, 1973, 1974, 1984), undervalue the role of intuition in their choices (Krieshok, 1998), and incorrectly assert they can be objective during introspective reflection on their choices (Klein, 2008; Krieshok, 1998). More consistent with dual-processing cognitive theory proposed by Kahneman (2003), the trilateral model highlights balancing System



1 intuitive processes with System 2 reasoning processes, in an effort to address the shortcomings of previous models of decision making that overemphasize the value of cognitive processes and objective decision making, which has shown itself to be limited (Kahneman & Klein, 2009; Klein, 2008; Krieschok et al., 2009; Lieberman, 2003; Tversky & Kahneman, 1973, 1974, 1984).

Thus, the trilateral model includes both intuitive and reasoning decision making processes to highlight the complimentary roles of each, with reasoning examining the “logic” behind a decision and intuition helping us to understand the underlying “instinct” about our decisions. Krieschok and colleagues (2009) noted this balance in career decisions as presenting itself in the “grunt” moment; the time when a career decision must be made, and reasoning must acknowledge the intuitive “right” feeling as a factor in the final decision. Social psychological research has long been aware of the role of emotions in cognition (Schachter, 1964), including how emotions affect cognition directly and indirectly through priming and selective attention to information (see London, 1997 for review). Furthermore, emotions affect cognition prospectively and retrospectively, as they influence how an event is experienced in the moment, and how an individual will recall the salient points of an event in review (London, 1997). While the construct of intuition cannot be reduced to only “emotion,” the instinctual sense (i.e., gut reaction) about a career decision can clearly impact how the decision is approached, examined, and eventually made.

Occupational engagement is what keeps cognitive and intuitive processes operating at their best, despite limitations of their ability and inherent biases. As Krieschok et al. (2009) wrote, “Through occupational engagement, vocational and self-schemas evolve and vocational judgments and decisions are more informed, as are judgments about the larger host of life matters. Adaptive career decision making, in which decision making is enhanced through the

accumulation of information and experience, becomes possible as a result of occupational engagement” (p. 284). Ideally, the adaptive decision maker is aware and critical of these biases, reflective on their previously held schematas regarding careers, and can rely on openness and willingness to dispute cognitions with feelings and experience.

### **Occupational Engagement**

One of Krieshok et al.'s (2009) unique contributions to the research on career decision making addresses the methods by which people engage with learning experiences and gather information to fund optimal decision making. Occupational engagement, the foundation of the trilateral model as defined by Krieshok et al. (2009), is how individuals gather the informational capital that funds their career decisions. Career decision makers must add to their account of knowledge through the process of engagement, including both exploration and enrichment processes, which are experiential learning opportunities. Occupational engagement includes traditional exploration efforts, which provide information to individuals currently in the decision making process (Cox et al., 2015; Krieshok et al., 2009). In addition, occupational engagement also adds the concept of enrichment. Enrichment activities occur when an individual engages with career and non-career related activities that provide information about the self and the world when a career decision is not imminent, increasing their ability to make adaptive future decisions about how the self fits in the world of work. This is in contrast to traditional career exploration, in which an individual perceives an upcoming career change and obtains information about the world of work through focused personal experiences. Occupational engagement marries the concepts of exploration and enrichment, encouraging an individual to purposefully explore the world of work in preparation for a career change, and consistently enriching the self and learning about the world even when a career decision is not imminent (Krieshok et al., 2009).

If knowledge of the self and the world of work is the bank account from which you draw to make optimal decisions, then occupational engagement is the incoming funding that keeps your account full. Enrichment behaviors could be thought of as small investments, in which the individual spends some of their time and resources increasing knowledge of the world of work and how they fit into it. These investments provide information. For example, you attend a local presentation on wind energy and the use of wind turbines but realize the physical demand for this work is high and not for you. Despite not “finding a job,” you integrate this learning and can use it in later decisions, such as evaluating other physical occupations. Other times, these investments can be gold mines, like a lucky choice of Apple stock in the 1980’s, and they pay significant dividends in direct outcomes. Continuing the previous example, you might attend the wind energy talk and meet a fellow renewable energy enthusiast who operates an automotive body shop, and after a positive conversation, they offer you a job. Regardless of an upcoming career change, enrichment activities consist of these daily opportunities to engage and learn about the self and the world of work and provide valuable information to future adaptive decisions.

Krieshok (1998) noted that introspection about career decisions is limited, and individuals tend to overvalue their ability to cerebrally deduce optimal career decisions based on reasoning. Additionally, those who use intuition as a reference for decision making are likely reflecting information previously learned and formed into career schematas, without the appropriate cynicism for their biases and potential for relying on “bad” information. Engagement, on the other hand, provides firsthand knowledge through experience about careers, increasing the fund of relevant and up to date knowledge for both reason and intuition decision making processes to draw upon. This hybrid approach of integrating traditional rational decision

making with experiential learning and engagement to encourage preparedness for change is considered adaptive rationality (Krieshok et al., 2009). Instead of reflecting on interests and feelings about careers in career guidance, individuals would benefit from engagement behaviors that allow an individual to “try on” a career and experience the feelings of that choice. As Krieshok et al. (2009) noted, “While it is clear that both reason and intuition play critical roles in career decision making, they depend on occupational engagement as the behavioral tool leading to their full development and optimal tuning.” (p. 284).

Additionally, steady engagement seems to currently be the most adaptable strategy an individual can take for the chaos and uncertainty in the modern world of work. As previously noted, the rate of change in the world of work is increasing exponentially, and job change initiated by the organization rather than the individual (e.g. layoffs, outsourcing, jobs replaced by technology) is increasingly common (Bright & Pryor, 2005; Ebberwein et al., 2004). Thus, the fund of information an individual gathers about any career is subject to significant and rapid depreciation. Enrichment activities buffer the impact of that depreciation, by being actively involved in information gathering regardless of expected career transitions. In traditional careers, exploring information on the career and the self before applying to an organization and then working “up the ladder” of command would have been sufficient. However, that simplistic model of work does not represent the modern world. To prepare individuals to succeed in this contemporary world, routine occupational engagement should become a norm rather than an ideal. In this sense the trilateral model values continually revisiting career choices, even when a career decision is not imminent, therefore supporting its focus on building adaptability.

Whereas previous vocational theories have placed emphasis on career decision making as a singular event, or even a cyclical event, the trilateral model focuses on developing an attitude

of continued learning and readiness for the unexpected in a career. In fact, previous theorists have identified exploration as a tool, which is reactively and cyclically used when career decisions are imminent (Savickas, 1997; Super & Knasel, 1981). The trilateral model acknowledges the importance of a skilled exploration state, while adding proactively and consistently used enrichment skills, which are more consistent with an individual's traits (Krieshok et al., 2009). It acknowledges that career decisions will have to be made and reasoning has value in decision making, while arguing against the emphasis on a single weighted career decision. Overemphasis on the static, one-time decision is inconsistent with the contemporary world of work (Blustein, 2005; Bright et al., 2005). Belief that career decisions are static, or cyclical but irregular, supports the continued use of traditional theory in applied settings, which undervalues an individual's contextual factors (Blustein, 2005), and can lead to stagnation in engagement efforts when people feel overwhelmed with complex choices (Julien, 1999). Consistent occupational engagement should be the goal of vocational psychologists, and specifically efforts should focus on the development of engagement skills and teaching people how to seek enrichment behaviors throughout the lifespan, rather than prescribing exploration behaviors in response to a specific career decision (Cox et al., 2015).

### ***Occupational Engagement Scale – Student (OES-S)***

The Occupational Engagement Scale was formally proposed as a conceptualization of engagement, the behavioral component of the trilateral model of adaptive career decision making by Krieshok, Black, & McKay (2009). Black (2006) was the first to operationalize occupational engagement for use with college populations, which was later capitalized upon by Cox et al. (2015) in their research developing the Occupational Engagement Scale-Student (OES-S) and assessing an initial validation of the measure. In the development of the OES-S, Cox et al.

(2015) identified a nine-item assessment with a single factor structure that they determined to be engagement, providing quality psychometrics for their measure. Researchers have since used OES-S scores to predict constructs of being “better-off” in the career search process (Cox et al., 2015; 2016). Measures of being “better-off” included vocational identity, academic major satisfaction, and an estimate of college education gains. They found that occupational engagement accounted for a significant portion of variance in all of the “better-off” measures, with notable strength in predicting vocational identity scores after accounting for participant age (Cox, Krieschok, Bjornsen, & Zumbo, 2015). Research by Ghosh and Fouad (2015) also supported occupational engagement’s ability to predict positive vocational outcomes, finding occupational engagement predicted readiness for career transitions, after accounting for career adaptability.

This previous research infers that occupational engagement, as a construct, has utility in the applied use of career interventions as a contributor to college student identity, readiness for career transitions, and perceptions of college success. However, little research has examined the trilateral model’s theoretical prediction that occupational engagement should lead to increased career adaptability. In a sample of Korean students, Kim & Lee (2018) found that occupational engagement significantly predicts career adaptability as measured by the Career Futures Inventory (described later in this chapter). Further, they found that occupational engagement significantly mediated the ability of other vocational attitudes to predict career adaptability, such as career decision making self-efficacy. This would suggest the behaviors associated with occupational engagement are important to the development of career adaptability, and they have additional positive influences beyond one’s attitude about ability to make career decisions when necessary.

Ghosh & Fouad (2018) also examined occupational engagement in relation to career adaptability via the Career Adapt-Abilities Scale (discussed later in this chapter) in an American student veteran population. Intriguingly, they identified a negative correlation between occupational engagement and career adaptability. They noted that future oriented planning activities involved in career adaptability might reduce the quantity of engagement behaviors, as student veterans look beyond their current position and then are less engaged in exploration activities. Given the conflictual outcomes of this recent research, further exploration into the relationship between occupational engagement and career adaptability is warranted. Additionally, occupational engagement has not been examined in relation to adaptability in an American adult population, nor has the updated Career Futures Inventory-Revised been used to assess career adaptability in relation to occupational engagement.

### **Summary of the Trilateral Model**

Krieshok et al.'s (2009) trilateral model seeks to enhance individual's adaptive career decision making ability in a chaotic marketplace by encouraging readiness for career transitions as common behavior. Consistent with the trilateral model, the adaptive individual is always learning, remaining critical of their cognitive biases (Krieshok, 1998), and always engaging in opportunities for learning and growth to update their schemata of the self and world of work. Furthermore, the trilateral model addresses career decision making holistically, including how people tend to make decisions both intuitively and rationally, and how their fund of information affects their decision quality (Krieshok et al., 2009). As a conceptualization of adaptive decision making traits, regardless of context, it effectively encourages a life-long learning approach that values feedback and continual growth and change. It would be appropriate, then, to infer that a

decision maker actively employing the trilateral processes would be more adaptable in all career decisions.

### **Career Adaptability**

The research on adaptability has been diverse and fruitful. Generally, there is consensus among researchers that individual agency is central to understanding how people prepare for planned and unforeseen career and work changes (Creed, Fallon, & Hood, 2009; Rottinghaus, Day, Borgen, 2005). However, defining career adaptability has been challenging as the construct includes both assessment of resources and assessment of motivations (Kim & Lee, 2018). Career adaptability definitions include both resource and motivation influences, although theoretical foundation can place an emphasis on one over another. For Super and Knasel (1981), career adaptability was a measure of career development that would reflect the experiences and readiness to decision making of the individual. This identified adaptability as a learned skill (Duffy, 2010), and supported Super's proposition that career adaptability be formally used as a replacement for the construct of career maturity. As a measure of readiness, Super and Knasel (1981) addressed the resources an individual acquires through time and experience that would increase an individual's ability to make adaptive career decisions (Kim & Lee, 2018).

Savickas formally defined career adaptability as "the readiness to cope with the predictable tasks of preparing for and participating in the world role and with the unpredictable adjustments prompted by changes in work and working conditions" (Savickas, 1997, p. 254). In his theoretical construction, Savickas identified components of concern, control, curiosity, and confidence in career adaptability. These four factors were present and supported in his operationalization of career adaptability in the Career Adapt-Abilities Scale (CAAS; Savickas & Porfeli, 2012). Fouad and colleagues (2016) summarized the interplay of these variables as



“individuals who are adaptable are able to demonstrate concern about their vocational future, exert control over this future, display curiosity, and display a level of confidence to pursue their aspirations” (p. 461). These specific sub-factors of the adaptability construct reflect a maturity and skill in career decision making, and high adaptability scores seemingly reflect an establishment in the career trajectory, as might be expected by constructs of control and confidence. Consistent with Super and Knasel, Savickas primarily focused on a resources approach to adaptability, as individuals establish their concern, control, and confidence in their vocational behaviors over time and with feedback from previous adaptive behaviors (Kim & Lee, 2018; Savickas, 1997).

Rottinghaus, Day, and Borgen (2005) defined career adaptability more generally as; the “capacity to cope with and capitalize on change in the future, level of comfort with new work responsibilities, and ability to recover when unforeseen events alter career plans” (p. 11). This definition includes conceptual components of Savickas’ work, such as some skill-based and self-regulatory readiness concepts (Creed et al., 2009). In addition, to previous conceptualizations, Rottinghaus et al. (2005; 2012) explored the attitudinal style of career adaptability, including its relationship to hope and optimism, ability to cope with negative events, and perceptions of control that contribute to individual agency. This approach aligns with the motivational assessment of career adaptability (Kim & Lee, 2018). Rottinghaus et al. (2005) operationalized career adaptability within the Career Futures Inventory and improved the measure later in the Career Futures Inventory – Revised (CFI-R; Rottinghaus, Buelow, Matyja, & Schneider, 2012). The measure includes five subfactors, including (1) career agency, (2) occupational awareness, (3) support, (4) work–life balance, and (5) negative career outlook. The CFI and CFI-R established a career adaptability measure that represents a primarily attitudinal approach to

adaptability, which also addressed the influence of contextual factors in decision making, highlighted by contemporary theories (Blustein, 2006; Blustein et al., 2008; Lent et al., 2000; Lent et al., 2016). Additionally, it delineates career adaptability as more consistent with a conglomeration of traits developed through experience than a reactive behavioral state, such as in previous measures.

### ***Rationale for the Career Futures Inventory-Revised***

The CFI-R represents an attitudinal, future-focused, self-regulatory, and agentic measure of career adaptability that promotes wise decision making without restricting adaptability to imminent career decisions (Rottinghaus et al., 2012). It also reflects components of previous adaptability definitions. While a total scale score was used in this study to capture a generalist career adaptability rating, brief mention of the subscales with regard to how they increase the diversity in measuring career adaptability can be helpful. The five subscales of the CFI-R draw from previous research valuing agency (Bandura, 2001; Savickas, 1997; Super & Knasel, 1981), the need for occupational information to make adaptable decisions (Holland, 1997; Krieshok et al., 2009; Parsons, 1909), proposals that reduced barriers and increased supports should increase adaptability (Duffy, Blustein, et al., 2016; Duffy, Douglass, et al., 2016), an understanding of work/school life balance and associated barriers (Blustein, 2013), and optimism as a willingness to be adaptable (Rottinghaus et al., 2005; Scheier & Carver, 1985). The CFI-R is an effective outcome measure for vocational research, particularly in exploring the establishment of adaptability attitudes.

Savickas' definition and operationalization of career adaptability is popular among vocational researchers and is widely used as a measure of an individual's skill in navigating career changes (Duffy, 2010). While consistent with his developmental and resource focused

approach, this emphasis restricts the use of the CAAS as a dispositional outcome measure of adaptability as a state behavior construct. Conversely, the CFI-R is more interested in positive career attitudes, general outcome expectations consistent with SCCT, perception of barriers consistent with PWT, personal agency outlined by Bandura, and informational gathering components of actual decision making. The CFI-R also supports a generalist approach to measuring career adaptability. Including both internal and external influences on individuals, it functions well as a general adaptability outcome measure and fits with PWT's emphasis on interplay between the individual and environment.

### *Agency Scale*

Savickas (1997) highlighted the role of control and confidence in adaptability, specifically the ability to exert control over future vocational behaviors and outcomes and possess the confidence to pursue goals. From a resources perspective (Kim & Lee, 2018), control and confidence are established with experience and reflect the attainment of individual assets (e.g., I have control of my choices because I am an autonomous adult, or I have confidence in my choices because I have connections in this career). Indeed, the perception that one's locus of control is external rather than internal can have significant effects on their vocational behavior (Duffy, 2010; Kim & Lee, 2018) but does not provide much room for intervention. As a relatively comprehensive measure, the CFI-R includes maturational items assessing Savickas' dimensions of control and confidence, and while balancing them with attitudinal perceptions of agency and perceived ability to implement choices (Rottinghaus et al., 2012). This is consistent with Bandura's (2001) agency, as the desire to exert control on situations with intentional behaviors to do so, and it reiterates the motivational focus of adaptability (Kim & Lee, 2018). The CFI-R's career agency scale assesses perceptions of

control, confidence, self-efficacy, and self-awareness. As such, its theory aligns with PWT's goals of understanding the subjective experience of the individual, valuing the importance of perceived control in their vocational behaviors and intentionality in enacting those behaviors (Blustein, 2006; Rottinghaus et al., 2012). This also allows for interventions in fostering sense of agency and correlated variables, such as career decision making self-efficacy (Hackett & Betz, 1995) and occupational engagement to increase adaptive rationality in career decision making (Krieshok et al., 2009), which aim to empower people.

### ***Occupational Awareness Scale***

Whereas Savickas identified the development of adaptability primarily takes place in the transition between school and work, Rottinghaus et al. (2005; 2012) identified adaptability to be a lifelong construct, which constantly develops and adjusts through continuous feedback from experiences. As such, it is consistent with the general psychological trait approach to career adaptability, as a construct that is not domain specific. This aligns with the trilateral model (Krieshok et al., 2009), which promotes continuous occupational engagement to fund self-awareness and occupational awareness, which are assessed within the CFI-R (Rottinghaus et al., 2012). It also is consistent with Krieshok et al.'s (2009) argument for the goal of career intervention to be the development of career adaptability and adaptive rationality rather than individual decision making. As individuals learn to engage throughout their life roles and regardless of imminent transitions (Cox et al., 2015; Krieshok et al., 2009), the CFI-R is positioned to be an ideal outcome measure for the development of career adaptability attitudes (Rottinghaus et al., 2012).

### ***Negative Career Outlook/Optimism Scale***

Within the CFI-R, the role of optimism as a proxy for self-regulatory coping provides an attitudinal assessment of an individual's ability to enact behaviors (Rottinghaus et al., 2012). An adaptable individual would be presumed to be able to "roll with the punches" and avoid dismay in the face of barriers and challenges, instead responding with flexibility. In comparison, Savickas' construct of concern, as a sub-factor of adaptability (Savickas & Porfeli, 2012), assumes that attention to future work life is always present, however only engaged during a career transition. The use of optimism in the CFI-R over a measure of concern is intended to reflect the trait nature of adaptability, rather than a state of concern when decisions are imminent. The self-regulating, coping traits is core to adaptability and is supported in the empirical literature (Creed et al., 2009; Savickas, 1997). Trait nature of shared optimism and adaptability is also congruent with the inventory's future orientation in name (career futures inventory) and item wording (Rottinghaus et al., 2012).

### ***Support and Work-Life Balance Scales***

The CFI-R's support and work-life balance scales reflect the importance of contextual influences in career behaviors and fits well with SCCT and PWT propositions. As measures of external influences, they provide comparative information to the previous scales' assessment of internal attitudes. Assessing resources necessary to adaptive behaviors, in conjunction with motivational attitudes, is an attempt to comprehensively assess the construct of career adaptability. The influence of supports, primarily from family and peers, has previously been measured affecting vocational behavior. Social support is positively correlated with career adaptability over time (Hirschi, 2009), and support from parents, teachers, and peers has been correlated with increased outcome expectations and reduced perceptions of career barriers

(Kenny & Bledsoe, 2005). Given this research, one's perceived level of support would be expected to influence their ability to react to unforeseeable career change. This understanding of adaptability aligns with PWT's emphasis on volition in career decisions and the role of privilege in career decision making. People will generally perceive they have more freedom in their career choices when supported by their social group (Hirschi, 2009; Kenny & Bledsoe, 2005), a privilege not shared by all (Blustein, 2001; Fouad et al., 2010; Lent et al., 2000).

The work-life balance scale of the CFI-R assesses the influence of barriers to adaptability, due to constricted ability to negotiate the demand of multiple life roles (Rottinghaus et al., 2012). Blustein (1997; 2001) elaborated on the importance of contextual roles in life, particularly how career and noncareer roles are mutually influential and cannot be logically separated by addressing only vocational behaviors. SCCT offers a similar sentiment, as an individual and their environment will interact and operate within the socially constructed norms for behavior, which direct the development of self-efficacy beliefs, outcome expectations, and personal goals (Lent, 2013; Lent et al., 2016). Life roles are inextricably intertwined with vocational behaviors (Ebberwein et al., 2004) and can act as a barrier to decision making by constricting choice (Gottfredson, 1981; Lent et al., 2000), or requiring that people make career choices based on survival rather than self-actualization (Blustein, 2006). In the CFI-R, the work-life balance subscale assesses the outcomes of previous barriers in balancing life roles, and it relates them to the inability to be adaptable based on the lack of privilege to set boundaries on time and work involvement from personal and family roles (Blustein et al., 2008).

### **Career Barriers and Career Privilege**

Previous and ongoing research continues to identify that career privilege and career barriers affect vocational behavior. Barriers are known to circumscribe career choices and force

people to compromise (Gottfredson, 1981). Career barriers also affect the experience of work, including the degree to which individuals receive support and equal pay for the work they complete in a given career (Reuben, Sapienza, & Zingales, 2014; Xu, 2008). Career barriers, in essence, are forms of oppression that restrict vocational behavior, originally categorized as internal conflicts and external frustrations (Swanson et al., 1996). Internal barriers are person centered, and include perceptions of the self, such as self-efficacy beliefs, motivation, and personality variables. Research has extensively shown that barriers based on person variables negatively affect self-efficacy beliefs and outcome expectations about one's ability to be successful in gendered or socioeconomic specific roles (Ali, McWhirter, & Chronister, 2005; Lent et al., 2000). External barriers are context centered, including sex discrimination, racial discrimination, financial restrictions, or lack of peer and family support (Swanson et al., 1996; Urbanaviciute et al., 2016). External barriers have also been identified based on socioeconomic status (Ali et al., 2005; Diemer & Ali, 2009), gender (Eddles et al., 1990; Fouad et al., 2010), and race or ethnicity (Luzzo, 1993; Gushue & Whiston, 2006; McWhirter, 1997)

Barriers can also be direct or indirect. PWF notes, for example, minority status can be an indirect barrier to vocational behaviors if the minority role has been socialized to a less privileged status, or if the minority status is also associated with less access to resources and opportunities (Blustein, 1997; 2001). As such, the minority status is not the barrier, but the attached social and cultural variables to the individual variable, and the resulting reduced access to resources based on group membership, form the barrier. Through the lens of PWT, barriers are attitudinal and quality research should rely more on interpreting the social construction of the barrier and its meaning to the individual than the quantification of career barriers (Blustein, 2006; Blustein et al., 2008; Duffy, Douglass, et al., 2016). Regardless of the type of barrier,

perception of oppression and marginalization due to career barriers is theoretically understood as negatively correlated with one's level of career privilege.

It is important to clarify the limits of operationalizing career barriers in research. The construct intends to increase the understanding of contextual variables of the individual related to career privileges. The goal of operationalizing career barriers is not to quantify privilege, nor to assign numerical values to determine who has more or less privilege across groups (Diemer & Ali, 2009; Duffy, Blustein, et al., 2016). This is consistent with the previously discussed SCCT interpretation of barriers as contextual factors that have socially constructed meaning and influence vocational behavior. As an attempt to more fully understand the complexities of clients with diverse and intersectional life experiences, it is valuable to operationalize the perception of career barriers to examine their influence on the individual career decision maker.

Pragmatically, the assessment of career barriers can be daunting, as Blustein (2006) noted that barriers might present from a multitude of sources. Even when assessing barriers in a heterogeneous population, individual experience is so variable that it can be difficult to efficiently and comprehensively assess a person's experiences with an individual barrier. It is likely that people will not have experienced many of the possible barriers in a given assessment, and they are then required to sort through many test items to report the few experiences they have had, potentially creating attentional and other concerns. However, researchers have operationalized the expectation of career barriers (Swanson et al., 1996), in order to reduce concerns with accuracy in self-reporting experiences and measure an individual's perception of obstacles to their career goals (which can serve as a proxy for one's perceived level of privilege).

Currently, two primary methods of assessing career privilege separate the empirical literature; assessing the perception of barriers or assessing work volition. Career barriers and



work volition are related and almost act as inverse constructs; however, researchers have proposed them as distinct from one another. Duffy, Douglass, et al. (2016) defined work volition as “one's perceived freedom of future work choice despite constraints” (p. 47). Significant, although weak, negative correlations have been found between work volition and career barriers, racial discrimination, and sex discrimination, indicating some support for their differentiation (Duffy, Diemer, & Jadidian, 2012; Duffy, Diemer, Perry, et al., 2012). PWF theory is often also cited as conceptual differentiation evidence for work volition and career barriers, however, both adult and student work volition scales include specific barriers in item wordings. The researchers noted the adult work volition scale includes a greater number of barrier specific items, which may blur the separation of volition and barriers.

Because of the construct overlap of career barriers and work volition, the current study focused on the experience of career barriers as a predictor of occupational engagement and career adaptability. Some research has highlighted the shared relationship between barriers and work volition, and while one study (Autin et al., 2017) claimed that work volition predicted career barriers more strongly than the inverse direction, there were limits to this conclusion. First, there exists significantly more research examining the role of career barriers to vocational behavior than in work volition, which should allow for additional comparisons of the results of the current study to existing literature. Secondly, the current measures of work volition are limited in their sensitivity in differences across gender and race or ethnicity (Duffy, Diemer, & Jadidian, 2012). And lastly, the current research is specifically interested in the experiences of individuals that restrict them from engagement opportunities and consequently hinder their development of career adaptability.

The Career Barriers Inventory-Revised (CBI-R), developed by Swanson, Daniels, & Tokar (1996), was used in the current study for its broad but thorough assessment of various career barriers. It consists of 13 scales of potential barriers, assessing both internal and external barriers. Each scale is designed to assess the individual's perception of the likelihood that they will experience the barrier in various settings. The scales range in content, including barriers such as experiencing discrimination based on gender or race, experiencing difficulties with decision making, and the influence of significant others impacting an individual's decision. Based on the high intercorrelations of individual scales (Rivera et al., 2007), the CBI-R can be summed, and the total score can be used as a general reflection of expected career barriers, which was the method of the current study.

Lent et al., (2000) noted the influence of contextual barriers in the development of self-efficacy beliefs and outcome expectations through SCCT. In their argument, the presence of career barriers directly influences how individuals assess their ability within a career behavior, as well as how they perceive the results, should they decide to attempt it. In the worst-case scenario, career barriers could also affect an individual directly through restricting their access to the behaviors, and indirectly by increasing their negative self-efficacy beliefs and outcome expectations, leading them to not pursue career goals. In much the same way, the current study postulated that the presence of career barriers would predict an individual's self-report of adaptable career decision making attitudes and behaviors. Endorsement of specific barriers would align with direct negative influences on adaptability; however, negative self-efficacy and outcome expectations would also indirectly influence the total measure of career adaptability, and would be reflected in the diversity of the CFI-R. Of further interest to the current study was whether participation in occupational engagement behaviors would moderate the negative

relationship between career barriers and career adaptability, or if the relationship would remain unchanged.

In related literature, the PWT has proposed the relationship of economic barriers to finding decent work is mediated by career adaptability (Blustein, 2013). Research has also postulated career barriers, including constraints and marginalization, predict an individual's career adaptability, including one study that identified subjective social status was positively correlated with career adaptability (Autin et al., 2017). Currently, only one empirical study has examined the relationship between a specific career barrier and occupational engagement. Kim, Kim, and Lee (2018) identified social support as a significant predictor of occupational engagement behaviors, suggesting that increased social support (stated differently as the lack of barriers from one's social group) can lead to increased occupational engagement. Across this research, the temporal organization of barriers presenting prior to adaptability development has been established. The trilateral model supports occupational engagement as an antecedent to adaptability (Krieshok et al., 2009), implying that it be positioned between the other constructs in time. The current study hoped to build on this research by expanding the literature on how the expectation of career barriers affects the development of career adaptability, and how occupational engagement interacts in the relationship to predict career adaptability.

### **Chapter 3: Methods**

The current research study had four primary research questions. First, does occupational engagement, as measured by the OES-S, correlate with career adaptability scores, as measured by the CFI-R in this sample? Second, does the expectation of encountering career barriers, as measured by the CBI-R, predict scores of career adaptability, as measured by the CFI-R? Third, does the presence of occupational engagement, as measured by the OES-S, predict scores of career adaptability, as measured by the CFI-R, after accounting for the expectation of career barriers, as measured by the CBI-R? And finally, will the expectation of career barriers, as measured by the CBI-R, and presence of occupational engagement, as measured by the OES-S, interact in predicting career adaptability scores, as measured by the CFI-R, in this sample? The following section reviews the participants, measures, procedures, and data analyses used to address these questions.

#### **Participants**

Participants were adults recruited via Amazon's web-based Mechanical Turk (MTurk) research and survey participation platform. All participants were required to be currently living in America and between 18-40 years of age. Internationally, nearly one third of the MTurk population is located in India, so to increase the generalizability of the current study to applied practice in America, the participant pool was restricted to individuals who were currently living in America (Goodman, Cryder, & Cheema, 2013). However, participants were not required to hold American citizenship. American geographic location of participants was confirmed by use of MTurk's selection criteria, which can restrict sample size based on demographics listed in an individual's account profile, including the ability to restrict sample size to a participant pool

located in the United States. Additionally, IP addresses of participants were referenced to verify the participant completed the survey while geographically located within United States.

Research on demographics of internet survey populations has noted a sharp decline in participants above the age of 40; one study reporting ages 40-100 comprised only 7.8% of a large unrestricted sample (Gosling, Vazire, Srivastava, & John, 2004). Data from such a small sample would be restricted in generalizability to the broader population, therefore, participant age was restricted in the current study to 18-40. Additionally, focusing the participant sample on a relatively young population increased the applicability of use of the OES-S, discussed in further detail later in this chapter. Following the participant's review and consent to an information statement, they were routed to the online data collection website, Qualtrics, to complete all measures.

MTurk gathers individuals to complete human intelligent tasks (HITs) for which they are compensated, and it has become a popular method of data collection among social scientists. The majority of MTurkers are female (60.1%), with a total MTurk population mean age of 32.3 and mean income of about \$55,000 per year (Berinsky, Huber, & Lenz, 2012). Additional research found American MTurkers to be significantly white (75%) and 88% of them reported living in metropolitan urban areas (Huff & Tingley, 2015). Research comparing coefficient alphas for data across multiple levels of participant compensation has found that at even low rates of pay, individuals appear to respond accurately, concluding that pay does not appear to significantly affect the quality of data collected (Buhrmester, Kwang, & Gosling, 2011). The current study was expected to take roughly 10-15 minutes to complete, and as such, participants were compensated \$1.00 for their time, which is above current pay rates of similar tasks. To further control for possible error, seven attention checks were embedded in the survey, and

participants were required to pass five (71%) of them to be included in the analyses. Participants were paid through the MTurk platform following verification of their completion of the survey, no longer than three days following survey completion, consistent with good standard of practice outlined in the MTurk service requesting guidelines.

Lastly, there have been stereotypes of the MTurk population that have deterred the use of this readily accessible population in previous research. Most salient to the current project is the assumption that internet solicited populations are less motivated than the general population, which might have implications for their level of occupational engagement. Research comparing personality scores of internet and in-person surveyed groups found no significant differences in the dispersion of personality types (Gosling et al., 2004). This supports assertions that MTurk populations should not be primarily skewed towards high introversion or low openness to experience, which would have confounded the conclusions of this study. The comparable personality ratings in both groups also supports the idea that anonymous internet samples were not enhancing their self-ratings to appear more attractive.

## **Measures**

### ***Demographic Questionnaire***

Specific demographics obtained were (a) age, (b) gender, (c) race/ethnicity, (d) marital status, (e) number of children, (f) military status, (g) level of education completed, (h) parents' level of education, (i) number of previous jobs held, (j) current employment status, and (k) current MTurk work status.

### ***Career Barriers Inventory – Revised***

The Career Barriers Inventory – Revised (CBI-R) is a 70 item self-report measure assessing 13 scales of various barriers, including (1) Sex Discrimination, (2) Lack of

Confidence, (3) Multiple Role Conflict, (4) Conflict Between Children and Career Demands, (5) Racial Discrimination, (6) Inadequate Preparation, (7) Disapproval by Significant Others, (8) Decision-Making Difficulties, (9) Dissatisfaction with Career, (10) Discouraged from Choosing Nontraditional Careers, (11) Disability/Health Concerns, (12) Job Market Constraints, and (13) Difficulties with Networking/Socialization (Swanson, Daniels, & Tokar, 1996). Participants respond to each barrier item identifying the likelihood that they will encounter the specific career barrier. Responses are recorded in Likert format, from 1 (“Very unlikely to encounter”) to 7 (“Very likely to encounter”). Higher scores indicate increased perception of encountering career barriers. The scale can be totaled for a generalized self-report rating of likelihood of encountering career barriers in multiple settings.

Intercorrelations between the scales were conducted to provide validity evidence of distinct yet related career barriers. Intercorrelations ranged from .27 to .80, with a median scale inter-correlation of .60. This supported the author’s assertion that scales assessed distinct constructs, despite some scales being closely aligned (e.g. intercorrelation of racial discrimination and sex discrimination was largest at .80, and intercorrelation of sex discrimination and multiple role conflict was second largest at .76). Additional validity evidence was provided by 11 of the 13 CBI-R scales having strong direct correlates to the original Career Barriers Inventory, ranging from .76 to 1.00 (two scales of the CBI-R did not, as they were new scales added in the revised assessment). Reliability evidence was established through internal consistency correlations within unique scales, assessed with Cronbach’s alpha. Internal consistency alpha coefficients varied from .64 (Disapproval by Significant Other, Difficulties with Networking/Socialization) to .86 (Sex Discrimination), with the mean alpha coefficient being .76 across all 13 scales. For the current study, the mean and standard deviation for the total

scale were calculated ( $M = 284.6$ ,  $SD = 100.3$ ,  $N = 198$ ), and the measure demonstrated good internal consistency reliability (Total Scale  $\alpha = .989$ ).

### ***Occupational Engagement Scale – Student***

The Occupational Engagement Scale – Student (OES-S) is a 9 item self-report measure assessing level of participation in engagement type behaviors, including exploration and enrichment behaviors (Cox, Krieschok, Bjornsen, & Zumbo, 2015). All items were written to be behavioral, consistent with the trilateral model's proposition that occupational engagement is behavioral in nature (Krieschok et al., 2009) and to increase ability to quantify an individual's current level of engagement. Individuals report their identification with the occupational engagement statements on a five-point Likert-type ranging from 1 ("Not at all like me") to 5 ("Very much like me"). Higher total scores indicate higher quantity of engagement behaviors. In initial development and validation, the scale had sound psychometric reliability evidence, with an alpha of .80, and a second administration and subsequent confirmatory factor analysis supported a single factor structure. Validity evidence for the OES-S was assessed through the strong theoretical background of the construct of engagement, confirmatory factor analysis that supported the single factor structure, and regression analysis that identified the OES-S's ability to significantly predict a participant's vocational identity, academic major satisfaction, and estimate of gains in higher education. Reliability evidence was previously established through strong internal consistency coefficients, with Cronbach's alpha of .80 for the single factor (Cox et al., 2015). For the current study, the mean and standard deviation for the total scale were calculated ( $M = 33.6$ ,  $SD = 5.8$ ,  $N = 198$ ), and the measure demonstrated good internal consistency reliability (Total Scale  $\alpha = .834$ ).



It should be noted that there exists an Occupational Engagement Scale for Employed Adults (OES-EA) and an OES-EA-Revised (Noble, 2008; Scott, 2006). The employed adult versions of occupational engagement were not used due to the lack of established validity research exploring their relationships with additional psychological and vocational measures, as compared to the OES-S (Cox et al., 2015; 2016; Ghosh & Fouad, 2018; Kim, Kim, et al., 2018; Kim & Lee, 2018). Further, both versions of the OES-EA were normed on populations currently employed full time (at or above 35 hours per week), who had been consistently employed at least 3 years (Noble, 2008) or 5 years (Scott, 2006), and were not considering retirement within the next 5 years (Noble, 2008; Scott, 2006). These population norms may not represent a significant portion of MTurkers who do not hold employment outside of MTurk work, as one study found 39.1% of MTurkers were unemployed, with an additional 22.9% who were underemployed or working part time (Shapiro, Chandler, & Mueller, 2013). Thus, the employed adult forms' specific items assessing current job involvement as a measure of occupational engagement would not be applicable to a significant number of participants.

The most recent version of the OES-S, used in the current study, includes nine items and was normed on a college population. However, the creators removed language pertaining to "students" or "student activities" that was present in previous versions (Cox, 2008; Cox et al., 2015). The recent OES-S focuses on generalized engagement behaviors which are based in theory to assess broad dimensions of occupational engagement and are proposed be generalizable to most populations. Additionally, the current study examined a restricted population of "young" adults aged 18-40, which should increase the applicability of the nine item OES-S normed on young adult populations in college. Lastly, the current project was primarily interested in broad engagement behaviors reflected in the single factor of occupational engagement in the OES-S,

rather than the dual factors of job curiosity and job involvement of the OES-EA and OES-ES-Revised scales (Noble; 2008; Scott, 2006).

### ***Career Futures Inventory – Revised***

The Career Futures Inventory – Revised (CFI-R) is a 28 item self-report measure of career adaptability (Rottinghaus, Day, & Borgen, 2005). The measure includes five scales; (1) Career Agency, (2) Negative Career Outlook, (3) Occupational Awareness, (4) Support, and (5) Work-Life Balance. Participants respond to each item with a 5-point Likert scale, ranging from 1 (“Strongly disagree”) to 5 (“Strongly agree”), assessing their identification with adaptable career behaviors and attitudes (e.g. “I keep current with job market trends”). Internal consistency coefficients within each of the five scales has previously established good reliability evidence, with Cronbach’s alpha coefficients in an initial sample ranging from .78 to .90 and in a validation sample ranging from .75 to .88. Exploratory factor analysis identified the five-factor structure, with factor loadings ranging from .51 to .90 within each scale. Validity evidence was established through confirmatory factor analysis, which supported the five-factor structure, and the scales’ sensitivity to differences among participants who were undecided, tentatively decided, or decided in their career choice. Additional validity evidence was obtained through correlations of the unique scales to similar vocational constructs, including career decision making self-efficacy, career decision making difficulties, and coping with stressful experiences. A total scale score can be calculated to capture a generalist career adaptability rating, as used in the current study, which benefits from the diversity of assessment of career adaptability across the five subscales. For the current study, the mean and standard deviation for the total scale were calculated ( $M = 106.7$ ,  $SD = 9.9$ ,  $N = 198$ ), and the measure demonstrated good internal consistency reliability (Total Scale  $\alpha = .802$ ).

As previously discussed in chapter two, research exploring career adaptability has used various measures to operationalize adaptability, including career decision making self-efficacy, agency, work volition, locus of control, and curiosity (Creed, et al., 2009; Duffy, Douglass, & Autin, 2015; Savickas, 1997). In the current study, the CFI-R was specifically selected for its emphasis on behaviors and attitudes of career adaptability, which reflect a motivational perspective over a resources perspective, in understanding career adaptability (Kim & Lee, 2018). All career adaptability measures involve both motivation and resource items, however, the current study is interested in how career barriers and occupational engagement behaviors predict an individual's motivations and attitudes toward their career adaptability. Additionally, the CFI-R includes components of optimistic attitudes (negative career outlook scale) in career adaptability, which may provide insights to the attitudinal effects of internalization of barriers on general outlook and coping.

### **Procedure**

All study procedures complied with the outlined research regulations established by the University of Kansas Institutional Review Board. Participants were recruited through the web-based Mechanical Turk (MTurk) platform, on which the survey was posted as available for roughly 36 hours, resulting in exhaustion of research funding. Participants completed all assessment items in a single administration through the online data collection site Qualtrics. Measures were administered within their original scale formatting. All statistical analyses were completed within the Statistical Package for the Social Sciences (SPSS).

### **Hypotheses**

The current project aimed to contribute to the existing literature by clarifying the relationship of career barriers, occupational engagement, and career adaptability constructs. The

relationship of these specific constructs has never been examined in an American population, to date, and has been explored only once outside of the United States (Kim & Lee, 2018). Beyond their shared relationships, the study examined the predictive ability of career barriers and occupational engagement to career adaptability, including the predicted variance in career adaptability due to the interaction of barriers and occupational engagement. The following four hypotheses were proposed:

***Hypothesis I***

Occupational engagement, as measured by the OES-S, will significantly positively correlate with career adaptability, as measured by the CFI-R.

***Hypothesis II***

Career barriers, as measured by the CBI-R, will predict a statistically significant portion of variance in career adaptability, as measured by the CFI-R. Specifically, increased expectation of career barriers will be associated with decreased career adaptability.

***Hypothesis III***

Occupational engagement, as measured by the OES-S, will predict a statistically significant portion of variance in career adaptability, as measured by the CFI-R, after accounting for variance predicted by career barriers, as measured by the CBI-R.

***Hypothesis IV***

There will be a statistically significant interaction effect of career barriers, as measured by the CBI-R, and occupational engagement, as measured by the OES-S, in predicting career adaptability, as measured by the CFI-R. Specifically, occupational engagement will moderate the relationship between expected career barriers and career adaptability.

## **Analyses**

All data analyses were conducted in SPSS. First, correlational analyses were conducted establish the relationships between career barriers (CBI-R), occupational engagement (OES-S), and career adaptability (CFI-R). Specifically, correlational analysis will provide information on how occupational engagement behaviors relate to career adaptability, within an American adult population via the CFI-R as a measure of adaptability. This was intended to clarify the previous research on occupational engagement, which has identified both positive and negative correlations between occupational engagement and career adaptability (Ghosh & Fouad, 2018; Kim & Lee, 2018)

Next, consistent with standards for exploratory research of relationships among constructs, hierarchical multiple regression analysis was conducted to determine the amount of variance in CFI-R scores that can be reliably predicted by CBI-R and OES-S scores. A priori power analysis through G\*Power version 3.1.92 indicated that, in order to achieve a power of .80 with an alpha of .05 and establish a medium effect size of .15, an minimum of 126 participants were required. Similar medium effect sizes have previously been established as sufficient in assessing the magnitude of relationships in multiple regression analyses, specifically exploring occupational engagement and adaptability constructs (Ghosh & Fouad, 2018). Hierarchical multiple regression analysis was conducted to provide information on the nature of these variables which have been temporally organized in theoretical literature (Krieshok et al., 2009), but not yet established in an American adult population. Career barriers have been proposed temporally as the first of these constructs to be established in the lifespan (Luzzo, 1993). Thus, CBI-R scores were entered into the regression analysis first, in order to identify the unique variance expectation of career barriers could predict in career adaptability. The second block in

the regression contained OES-S scores, to assess the amount of variance OES-S scores uniquely accounts for in career adaptability, after accounting for the perception of barriers. The third block in the regression contained both CBI-R and OES-S scores as an interaction, to assess for a statistically significant interaction effect in predicting variance in career adaptability scores. Further, this allowed examination of the possible moderation effect of occupational engagement upon the temporally defined relationship between career barriers and career adaptability. This moderation analysis provided information on how the presence of occupational engagement behaviors affects the predictive ability of expected career barriers on career adaptability.

## Chapter 4: Results

The present study was designed to examine the relationships among occupational engagement, career barriers, and career adaptability among an adult population. The following chapter describes the procedures used to analyze the collected survey data and provides information about sample demographics, descriptive statistics, and results of multiple regressions performed to answer the research questions. These results are organized based upon the proposed research questions.

### Participant Characteristics

All participant data was collected using Amazon's MTurk online platform. 318 total participants initiated the survey, 101 of which did not complete the survey. An additional 10 participants were removed from the analysis due to failure to meet survey criteria indicated at the beginning of the survey (between 18-40 years of age and currently living in America). Lastly, 9 participants did not pass the attention checks embedded in the survey (minimum 70% accuracy to pass), and data from these individuals was not included in the final analysis.

The resulting data set ( $N = 198$ ) was analyzed for the current study. Participants were 36.9% female ( $N = 73$ ) and had a mean age of 31.32 years ( $SD = 4.91$ ). Regarding ethnicity, 106 (53.5%) participants identified as White, 40 (20.2%) identified as Black or African American, 31 (15.7%) identified as Hispanic or Latino/a, 15 (7.6%) identified as Asian, 4 (2.0%) identified as Native American or Alaska Native, one (0.5%) participant identified as Middle Eastern, and one (0.5%) participant identified as Other and volunteered "mixed" as a descriptor.

Participants reported variable education levels. 104 (52.5%) participants had completed a bachelor's degree, 45 (22.7%) had completed a master's degree, 22 (11.1%) completed some college coursework but had not obtained a degree, 15 (7.6%) completed an associate's or

technical degree, 9 (4.5%) had a high school diploma, 2 (1%) completed a doctoral degree, and one (0.5%) participant did not complete high school. 48 (24.2%) participants were current or previous members of the United States Armed Forces.

Regarding participants' current work but not including their work through MTurk, 169 (85.4%) participants reported being employed full time, 21 (10.6%) identified being employed part time, 5 (2.5%) identified being unemployed and looking for work, 2 (1.0%) identified holding seasonal or temporary work, and one (0.5%) participant identified as being unemployed and not looking for work. Regarding participants' MTurk work, 76 (38.4%) participants identified their MTurk work "for extra cash or as a hobby," 68 (34.3%) identified MTurk work as their full time job, 53 (26.8%) identified MTurk as their part time job, and one (0.5%) participant identified their MTurk work as rare or infrequent. Due to inconsistencies in responding or possible misinterpretation of work status questions (e.g., 85.4% of the sample indicated full time employment outside of MTurk, while 38.4% of the sample identified MTurk as their full time employment), work status demographics were omitted from the analyses.

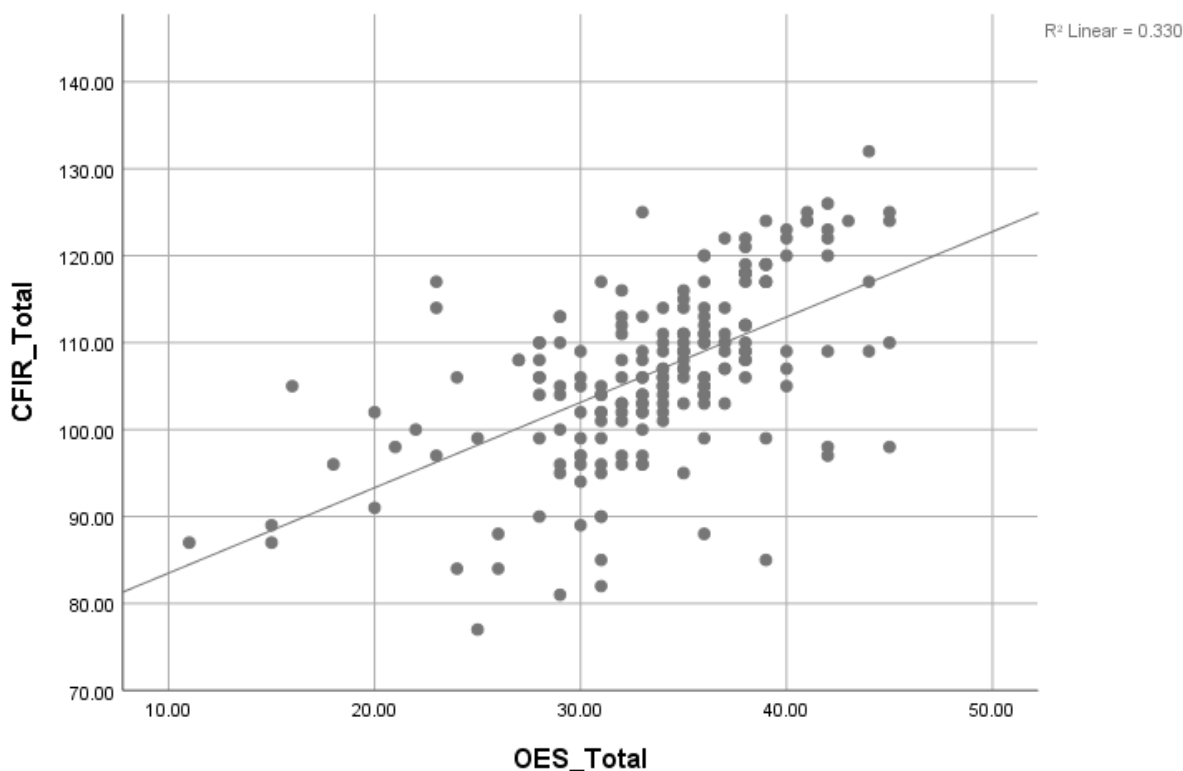
### **Question I**

The first research question addressed the relationship among occupational engagement and career adaptability for this adult sample. Bivariate correlational analysis was conducted with the measures of occupational engagement and career adaptability. The results showed a statistically significant, moderate positive correlation ( $r = .574, p < .001$ ) between occupational engagement and career adaptability, as was expected for these theoretically related constructs. Figure 1 shows a simple scatter plot for visualization of the correlation of the two variables. Data from this sample supported the hypothesis that there would be a significant positive correlation between occupational engagement and career adaptability for this sample.



**Figure 1**

*Correlation of Occupational Engagement and Career Adaptability with Line of Best Fit*



*Note.* OES\_Total represents total score on the Occupational Engagement Scale-Student.

CFIR\_Total represents total score on the Career Futures Inventory-Revised scale.

## **Question II**

The second research question addressed the relationship between the expectation of encountering career barriers and career adaptability. Regression analysis was performed to examine how the expectation of encountering career barriers accounts for variance in career adaptability (Table 1). Career adaptability total score was entered as the criterion variable, and career barriers total score was entered as the predictor variable. A significant, weak positive correlation ( $r = .216, p < .01$ ) was observed between expectation of career barriers and career adaptability. Results of the regression analysis indicated the expectation of career barriers

accounted for a significant but small (4.7%) amount of the variance in career adaptability ( $R^2 = .047$ ,  $F [1, 196] = 9.60$ ,  $p < .01$ , 95% CI [.006, .114]). Results from this sample supported the hypothesis that expectations of career barriers would account for a significant amount of variance in career adaptability. However, the direction of this relationship in the hypothesis was not supported, as expectation of career barriers and career adaptability scores shared a positive correlation, indicating that as expectations of career barriers increased, so did career adaptability.

**Table 1**

*Regression of Career Adaptability (CFIR) on Career Barriers (CBIRL)*

*Model Summary<sup>b</sup>*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.216 <sup>a</sup>	.047	.042	9.74017

a. Predictors: (Constant), CBIRL\_Total

b. Dependent Variable: CFIR\_Total

### Question III

The third research question addressed whether occupational engagement explained unique variance in career adaptability, after accounting for the expectation of career barriers. A hierarchical multiple regression was completed to assess the relationship of the variables (Table 2). Career adaptability was entered as the criterion variable, and career barriers total score and occupational engagement were entered as predictor variables. Career barriers was entered as the first step in the hierarchical regression, which accounted for 4.7% of unique variance in career adaptability.

The second step in the sequential regression included occupational engagement, to determine if occupational engagement accounted for a statistically significant amount of unique variance, after controlling for expectation of career barriers. Expectation of career barriers and

occupational engagement accounted for a total of 34.1% of the unique variance in career adaptability. The addition of occupational engagement explained an additional 29.5% of the variance in career adaptability ( $\Delta R^2 = .295$ ,  $F [2, 195] = 50.53$ ,  $p < .001$ ,  $Model R^2 = 3.41$ , 95% CI [.234, .429), which was statistically significant. Within the second step of the regression, the semi-partial correlation (.543) of occupational engagement was significant, suggesting occupational engagement had a large effect on career adaptability scores. The unstandardized coefficient ( $b$ ) for expectations of career barriers was .011 ( $t [195] = .1.85$ ,  $p = .066$ ), indicating this variable was not found to be statistically significant. The unstandardized coefficient ( $b$ ) for occupational engagement was .946 ( $t [195] = 9.34$ ,  $p < .001$ ;  $\beta = .553$ , 95% CI [.746, 1.145]). In the standardized format, a one standard deviation increase in occupational engagement resulted in a .553 standard deviation increase in career adaptability, while controlling for expectation of career barriers. The standardized coefficient ( $\beta$ ) associated with occupational engagement is considered to have a large effect on career adaptability. Overall, the data in this sample supported the hypothesis that occupational engagement would predict a significant amount of unique variance, after controlling for the expectation of career barriers.

**Table 2**

*Hierarchical Multiple Regression of Career Adaptability (CFIR) on Career Barriers (CBIRL) and Occupational Engagement (OES)*

*Model Summary<sup>c</sup>*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			Sig. F Change	
					R Square Change	F Change	df1		df2
1	.216 <sup>a</sup>	.047	.042	9.74017	.047	9.600	1	196	.002
2	.584 <sup>b</sup>	.341	.335	8.11678	.295	87.242	1	195	.000

a. Predictors: (Constant), CBIRL\_Total

b. Predictors: (Constant), CBIRL\_Total, OES\_Total

c. Dependent Variable: CFIR\_Total

#### Question IV

The fourth research question addressed whether occupational engagement and career barriers would have a statistically significant interaction effect in explaining unique variance in career adaptability, including the hypothesized moderation effect of occupational engagement in the relationship between career barriers and career adaptability. A hierarchical multiple regression analysis (moderation) was utilized to investigate this relationship (Table 3). First, a standardized cross-product of the career barriers and occupational engagement variables was created. Career adaptability was regressed on career barriers and occupational engagement in a simultaneous regression. Career barriers were entered in the first block, occupational engagement was added to the second block, and the career barriers X occupational engagement cross-product was added in the final, sequential step. As previously noted, expectation of career barriers accounted for 4.7% of the variance in career adaptability in the initial step of the regression. The addition of occupational engagement in the second step accounted for an additional unique 29.5% of the variance in career adaptability. Finally, the career barriers X occupational engagement cross-product accounted for an additional 7.7% of variance in career adaptability ( $\Delta R^2 = .077$ ,  $F [3, 194] = 25.774$ ,  $p < .001$ ,  $Model R^2 = .419$ , 95% CI [.310, .497]). The data met the assumption of collinearity and multicollinearity was not a concern (career barriers, tolerance = .824, VIF = 1.214; occupational engagement, tolerance = .728, VIF = 1.374, barriers x engagement interaction, tolerance = .706, VIF = 1.417). The interaction between expectation of career barriers and occupational engagement was statistically significant for career adaptability. The data in this sample support the hypothesis that occupational engagement moderates the relationship between expectation of barriers and career adaptability.

**Table 3**

*Hierarchical Multiple Regression of Career Adaptability (CFIR) on Career Barriers (CBIRL) and Occupational Engagement (OES) with Interaction Effect*

*Model Summary<sup>d</sup>*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.216 <sup>a</sup>	.047	.042	9.74017	.047	9.600	1	196	.002
2	.584 <sup>b</sup>	.341	.335	8.11678	.295	87.242	1	195	.000
3	.647 <sup>c</sup>	.419	.410	7.64615	.077	25.744	1	194	.000

a. Predictors: (Constant), CBIRL\_Total

b. Predictors: (Constant), CBIRL\_Total, OES\_Total

c. Predictors: (Constant), CBIRL\_Total, OES\_Total, CBIL\_OES\_Interaction

d. Dependent Variable: CFIR\_Total

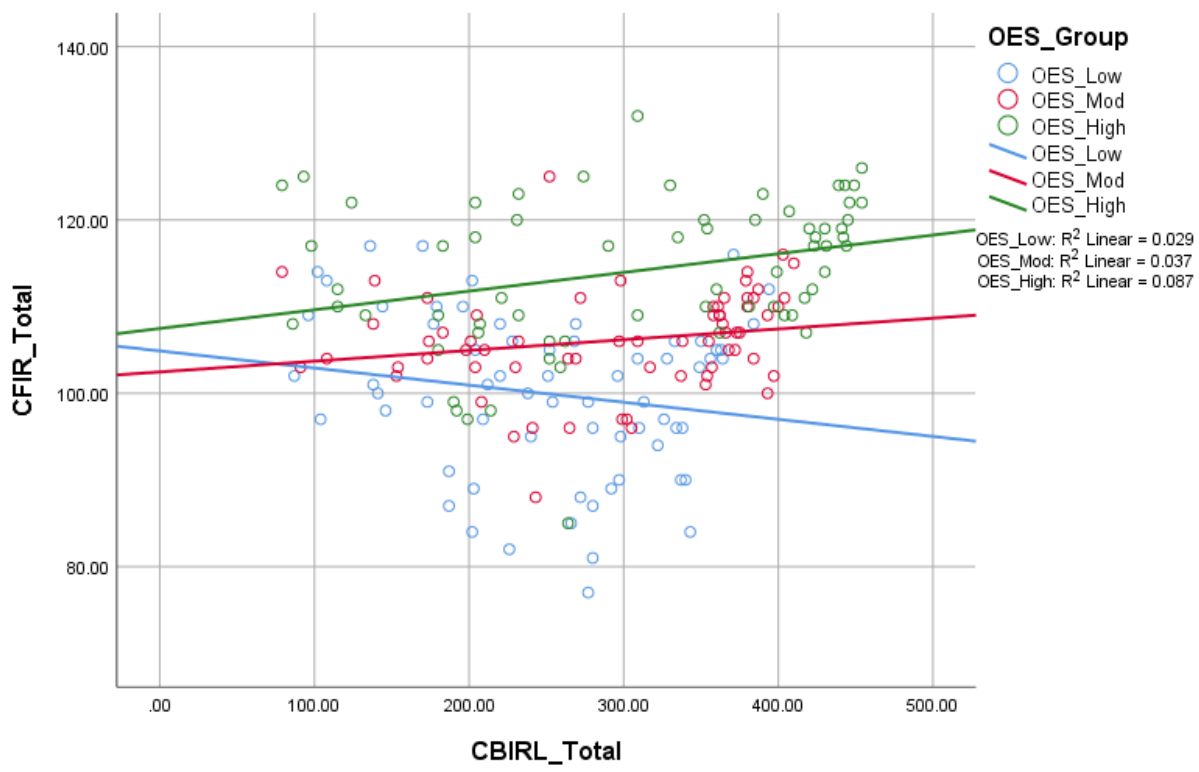
To more clearly illustrate the interaction effect of these variables, a scatterplot (Figure 2) was generated to demonstrate the effect of expected career barriers on career adaptability as moderated by occupational engagement. This allowed examination of the effect of expected career barriers on career adaptability, depending on the level of occupational engagement. First, occupational engagement was split by selecting cut points for three different groups and recoded into three different variables; low, moderate, and high occupational engagement. Group one (blue line) represents the group of individuals with the lowest occupational engagement. Group two (red line) represents the moderate group, and group three (green line) represents individuals who endorse the highest occupational engagement.

Interestingly, for the group with the lowest occupational engagement, expectation of career barriers was negatively correlated with career adaptability ( $r = -0.17$ ). This negative correlation was previously obscured when career adaptability scores were observed across the entire sample of normally distributed occupational engagement scores. Data from individuals in groups two and three, which correspond to the moderate and highest occupational engagement

groups, respectively, indicate that increased occupational engagement moderates the negative correlation between expected career barriers and career adaptability, resulting in increased career adaptability. That is, the effect of expected career barriers on career adaptability depends on occupational engagement. The negative effects of expected career barriers on career adaptability are reduced for those who are occupationally engaged. There was a negative effect of career barriers on career adaptability for those who were not occupationally engaged. This finding supported the hypothesis that expectation of career barriers and occupational engagement would have a statistically significant interaction effect in predicting career adaptability.

**Figure 2**

*Career Barriers on Career Adaptability by Occupational Engagement Group*



*Note.* CBIRL\_Total represents the total score on the Career Barriers Inventory-Revised scale for likelihood of encountering career barriers. CFIR\_Total represents total score on the Career Futures Inventory-Revised scale, after reverse scoring.

## **Chapter 5: Discussion**

This chapter offers a summary and interpretation of the main findings of this study by reviewing the results from the correlational and hierarchical regression analyses. The chapter will also include a discussion of how these results fit into current and future research exploring the development of career adaptability, as well as the possible implications for vocational psychology interventions. Finally, the limitations of this study and future directions for research are discussed.

### **Summary of the Findings**

The present study sought to add to the empirical literature on the development of career adaptability by examining theoretically proposed variables that should predict an individual's career adaptability. A significant amount of literature, both empirical and theoretical, has proposed career adaptability as an ideal outcome of developing career decision makers (Fouad, et al., 2016; Krieshok et al., 2009; Rottinghaus et al., 2005; Savickas, 1997; Super & Knasel, 1981). Further, researchers have identified many variables positively correlated with career adaptability, such as successful transition from school to work (Koen, Klehe, & Van Vianen, 2012), professional well-being (Taber & Blankemeyer, 2015), and occupational decision making self-efficacy (Rudolf et al., 2017). Research has also established a negative relationships between the perception of career barriers and positive vocational outcomes (Lent et al., 2000; Creed et al., 2004; Urbanaviciute et al., 2016) However, little research has explored the ability of individual career variables, especially occupational engagement, to predict actual variance in career adaptability scores (Ghosh & Fouad, 2018; Kim & Lee, 2018). The primary goals of the present study were to establish the relationship between occupational engagement and career adaptability, explore the role of occupational engagement in predicting career adaptability, and



examine the theoretically proposed ability of occupational engagement to moderate the effects of expected career barriers in developing adaptability.

This study aimed to examine a participant sample aligned with clinical populations most likely seen in the applied practice of vocational psychology, outside of the university setting. While college students are a common population seeking vocational guidance, contemporary vocational psychologists have emphasized the importance of understanding the psychology of working with larger sections of the population, especially those that do not have the privilege of making career decisions based on their interests, but rather must work for survival (Blustein, 1997; 2001; 2006; 2013). The current study utilized Amazon's MTurk platform to increase the likelihood that the participant pool would be generalizable to the average American citizen.

Descriptive statistics from the sample indicated a relatively balanced participant pool based on gender (36.9% female;  $N = 73$ ) and age (mean = 31.32 years;  $SD = 4.91$ ) for the study's goal of assessing younger working populations (participant age was restricted to 18-40). The study also was relatively diverse, with 53.5% of individuals identifying as White, 20.2% as Black, 15.5% as Latino/a, and 2% identifying as Asian. In comparison, the U.S. Census Bureau (2020) estimated in 2018 the US population identified roughly as 76.5% White, 13.4% Black, 18.3% Latino/a, and 5.9% Asian. However, the current sample was highly educated, as 83.8% of participants ( $N = 166$ ) had completed some form of tertiary education, ranging from an associate to doctoral level education. The high education level of this sample may limit the generalizability of the study's findings to the average American citizen. Further, the current sample was comprised of a large number of current or previous military service members (24.2%;  $N = 48$ ). Military service members, specifically student veteran populations, have been identified as having a negative relationship between career adaptability and occupational engagement (Ghosh

& Fouad, 2018), albeit, with a different measure of career adaptability. Given the large sample of current or previous military service members in this study's sample, Ghosh and Fouad's (2018) finding may indicate that the relationship between occupational engagement and career adaptability in the current study would have been larger, had the sample more closely reflected the percentage of service members in the general public.

Initially, it was predicted that occupational engagement, as assessed by the OES-S, would positively correlate with career adaptability, as assessed by the CFI-R (Hypothesis 1).

Consistent with the Trilateral Model of career decision making, occupational engagement aligned behaviors and attitudes should fund an individual's experiential knowledge and lead to more informed and higher quality career decisions (Krieshok et al., 2009). While occupational engagement has been correlated with vocational identity and positive vocational outcomes for college students (Cox et al., 2015), there has been little and mixed evidence for the relationship between occupational engagement and career adaptability. The current study identified a moderate positive relationship between occupational engagement and career adaptability, contradictory to the previous finding of Ghosh and Fouad (2018), who found a negative relationship between the variables in a student veteran population while measuring career adaptability using the Career Adapt-Abilities Scale (CAAS). The CAAS item structure includes a strong emphasis on future oriented planning activities, and the negative correlation with occupational engagement was postulated to be a result of conflict between future oriented behaviors and engagement in current experiential learning opportunities. The current study, using the Career Futures Inventory-Revised, appears to operationalize career adaptability more generally, noting coping skills and capitalizing on changes when they arise through flexibility (Rottinghaus, 2005). This likely accounted for the moderate positive correlation ( $r = .574$ ) found

between occupational engagement and career adaptability, which is consistent with the theoretical proposal originally outlined in the Trilateral Model (Krieshok et al., 2009).

Occupational engagement has been observed predicting positive vocational outcomes, such as readiness for career transitions, and occupational engagement has been predicted by an individual's curiosity (Ghosh & Fouad, 2018). However, only one previous study had examined the ability of occupational engagement to predict variance in career adaptability, in which occupational engagement was examined as a mediator of control and self-efficacy measures in predicting adaptability in a Korean student sample (Kim & Lee, 2018). The current study hypothesized that occupational engagement would account for a significant portion of unique variance in career adaptability, after accounting for the expectation of career barriers (Hypothesis 3). The current data sample supported this hypothesis, as 29.5% of the variance in career adaptability was explained by one's level of occupational engagement. This finding appears to support the theoretically outlined developmental nature of career adaptability. As noted in the literature review, career barriers, which can be systemic and based on individual demographics (e.g. gender, race, ethnicity, SES, etc.), are likely to be experienced across the entire lifespan. It appears that despite the expectation of those barriers, the action of occupationally engaging can allow individuals to increase their career adaptability and benefit from the host of positive vocational outcomes associated with being more adaptable.

One of the proposed limits to "prescribing" occupational engagement in vocational guidance practice was the requirement of resources inherent in the construct of occupational engagement, which was apparent in the item wording of the Occupational Engagement Scale-Student (OES). As contemporary theories of vocational psychology have identified, the vast majority of the working population in the United States (and to a greater extent, the world) must

work to survive (Blustein, 1997; 2001; Blustein et al., 2008). For these individuals, career decisions are not made based on interests or values, but rather on necessity in meeting basic life needs. Thus, the experience of career barriers that circumscribe career choices and force people to compromise is likely the norm, rather than the exception, for most of the working population. It would logically follow that the expectation of encountering career barriers, which may be systemic and pervasive across the lifespan, would be negatively correlated with the privilege in work volition and behaviors, and negatively correlated with career adaptability. The expectation of career barriers was hypothesized to predict a significant amount of variance in career adaptability, including expectation of career barriers and career adaptability to be negatively correlated (Hypothesis 2). Interestingly, the current study found a positive correlation ( $r = .216$ ) between the expectation of career barriers and career adaptability, and expectation of career barriers accounted for a small but significant amount of variance in career adaptability scores. This suggests that as the expectation of career barriers increase, participants career adaptability also increased. One interpretation of this finding that has been identified in previous literature is that the expectation of career barriers may have a motivating effect on individuals, who might interpret expected career barriers as a challenge factor (Urbanaviciute et al., 2016). However, the interaction effect of career barriers and occupational engagement in predicting variance in career adaptability provided additional clarity to the relationships among these variables, beyond the simple total sample correlation between career barriers and career adaptability.

It was hypothesized that the expectation of career barriers and occupational engagement would have a significant interaction effect in predicting variance in career adaptability, such that occupational engagement would successfully moderate the relationship between expected career barriers and career adaptability (Hypothesis 4), and the current data sample supported that

hypothesis. Occupational engagement was a successful moderator of the effect of career barriers on career adaptability. That is, when occupational engagement was low, expectation of career barriers was negatively correlated with career adaptability. However, the moderate and high occupational engagement groups had a positive relationship with career adaptability, despite the expectation of career barriers. This implies that occupational engagement can be successfully used as a vocational intervention and should increase career adaptability scores in populations with various levels of expected career barriers. While the “prescription” of occupational engagement still includes some barriers in access limitations for individuals who do not currently have high levels of privilege in career volition and resources, the data supports that increasing access for less-privileged populations will support their development of career adaptability.

### **Limitations**

As with any study, several limitations are present in the current research project. Of note, generating a participant sample from Amazon’s MTurk produces some limitations, despite its proposed increased generalizability to the average working American. Participants are paid to complete tasks through the MTurk platform, which can produce selection biases as workers choose among tasks based on payment and required time to complete the task. This selection bias could negatively impact the internal validity of the sample.

Further, the current sample consisted of a highly educated group of participants, which may limit the generalizability of findings to the average American citizen. Advanced education levels would not be thought of as associated with the average life experience of someone with less privilege in career decision making. The use of Amazon’s MTurk platform to collect data was aimed at measuring a participant sample more representative of the general American population, and no requirements for education level were established prior to completing the

survey. However, it may be that access to a reliable internet connection, ownership of an internet capable device, and knowledge of an online platform to complete human tasks and generate income may have indirectly restricted the sample to a population with established access to resources, which could be a reflection of privilege. That is, MTurkers may, on average, have a higher education level and reflect a more privileged status than the general public. As was also previously noted, the large portion of military service members in this sample may have influenced the observed relationship between occupational engagement and career adaptability, given the mixed research identified with these constructs in a student veteran population. Additionally, while participants were required to be located in America to increase generalizability of the results, including use of geographical location selection criteria within the MTurk platform and cross-referencing public IP addresses for American network access, it is possible that individuals may have used proxy servers to obscure their location, creating a threat to external validity.

The assessment of career barriers has inherent limitations, notably in adequately encapsulating the entire experience of “barriers.” The experience of career barriers can be expected to significantly vary among individuals. The Career Barriers Inventory-Revised is a lengthy assessment (70 items), but despite its broad inclusion of barrier types (e.g., sex discrimination, racial discrimination, family and career conflict, networking difficulties, etc.) it is limited in its ability to fully capture the subjective expectation of career barriers. As the world of work continues to change, new barriers likely will arise (e.g., limited understanding of technology or difficulties finding online job postings) which are unaccounted for by the current measure. Future research would do well to continue developing and using revised editions of measures of career barriers that reflect changes in the modern workplace.

Additionally, assessing an individual's expectation of encountering career barriers is subjective and related to their unique experience. This rating may fluctuate based on an individual's openness to endorsing the potential barriers they could face, and it does not directly translate to a quantifiable or objective "privilege level" that can be easily compared across groups of participants. Further, the experience of career barriers has been known to confound demographic variables, including socioeconomic status accounting for differences previously attributed to ethnicity (McWhirter, 1997). In the current study, expectation of career barriers was used only as a general proxy for each participant's sense of their ability to make career decisions without being impeded. As noted previously in Chapter 2, the empirical literature is divided on the use of assessing career barriers or career volition in most effectively addressing career decision making privilege. However, both approaches use item wordings associated with the experience of career barriers. As such, they are limited by the inability to operationalize privilege due to the diverse nature with which people experience career barriers, and the tendency of associated variables to confound. Conclusions are limited in generalizing to the experience of career privilege of larger populations, due to the inability to operationalize the construct of privilege with the current state of career assessments.

In assessing occupational engagement, the OES-S scale (which was normed with a student population) was chosen as the best available assessment for an early career participant sample. The OES-S scale does not include item language associated with a student experience, reports a single factor structure and favorable psychometrics, and is arguably more aligned with the current participant sample than other "working adult" assessments of occupational engagement. The measure also showed good internal consistency reliability (Total Scale  $\alpha = .834$ ) in the current study, supporting its use with this participant sample. However, there exists

a threat to internal validity given the lack of previous evidence in exploring norms with this measure in a non-student population.

Lastly, a limitation of this study, as with any self-report survey type research, is that data from all measures (CBI-R, OES-S, CFI-R) were subject to self-report biases of the participant. It is possible that participants endorsed items due to social desirability (i.e. they wanted to present their career behaviors and attitudes positively or they were embarrassed by their career attitudes and behaviors), or other reasons. While all participant responses were kept anonymous, items in measures included face valid “positive” behaviors which may increase the likelihood of participants overreporting their actual levels of occupational engagement or career adaptability, due to social desirability.

### **Directions for Future Research**

For vocational psychology remain viable to the experience of the general working population, future research must be oriented towards balanced research with both student and non-student populations. Further, consistent with contemporary psychological theories, the emphasis on understanding the experiences of less privileged populations is paramount. The current study established that occupational engagement behaviors are beneficial to large swaths of the general population, and occupational engagement moderates the negative effects of expected career barriers in developing career adaptability. Further research is needed exploring how to support individuals in becoming occupationally engaged, including increasing access to resources and experiences consistent with the construct of occupational engagement. Research exploring the occupational engagement, separate from other forms of work or career engagement (Ghosh & Fouad, 2018), as it relates to adaptive career decision making and positive vocational outcomes would also benefit the existing vocational psychology literature.



Future research would also benefit from additional data regarding social supports, resilience, and other factors impacting how people react to career barriers. While much empirical literature exists regarding the negative outcomes associated with career barriers (Duffy, Douglass, et al., 2016), less research examines factors that might moderate the negative impacts of career barriers. Ideally, this future research would increase understanding of how individuals respond and overcome career barriers, explore additional moderating factors of career barriers, and identify methods by which less privileged individuals can increase their occupational engagement in the service of becoming adaptable career decision makers.

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**Appendix A: Correlations Among Expected Career Barriers, Occupational Engagement,  
and Career Adaptability**

		CBIR_Total	OES_Total	CFIR_Total
CBIR_Total	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	198		
OES_Total	Pearson Correlation	.193**	1	
	Sig. (2-tailed)	.007		
	N	198	198	
CFIR_Total	Pearson Correlation	.216**	.574**	1
	Sig. (2-tailed)	.002	.000	
	N	198	198	198

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Appendix B: Demographic Questionnaire**

Q1 What is your age? (example: 25) \_\_\_\_\_

Q2 With which gender do you most identify?

- Male
- Female
- Transgender Female
- Transgender Male
- Non-Conforming
- Other Identity \_\_\_\_\_

Q3 With which race or ethnicity do you most identify?

- Asian
- Black or African American
- Hispanic or Latino
- Middle Eastern
- Native American or Alaska Native
- Native Hawaiian or Pacific Islander
- White
- Other \_\_\_\_\_

Q4 What is your marital status?

- Single, never married
- In a committed relationship, but not married
- Married
- Divorced
- Widowed

Q5 How many children do you have? (example: 2) \_\_\_\_\_

Q6 Are you currently, or have you previously served in the United States Armed Forces?

- Yes
- No

Q7 What is the highest level of education you have completed?

- I did not finish high school
- High School Diploma
- GED or Equivalent Degree
- Some College/University (1-3 years, did not earn degree)
- Technical or Associate Degree
- Bachelor's (4-year) Degree
- Master's Degree
- J.D./M.D./Doctoral Degree

Q8 What is the highest level of education either of your parents completed?

- Neither of my parents finished high school
- High School Diploma
- GED or Equivalent Degree
- Some College/University (1-3 years, did not earn degree)
- Technical or Associate Degree
- Bachelor's (4-year) Degree
- Master's Degree
- J.D./M.D./Doctoral Degree
- I don't know my parents' education

Q9 How many different jobs have you previously had? (example: 4)

If you have never had a job, please write "N/A" below. \_\_\_\_\_

Q10 What is your current employment status, **not including MTurk work**?

- Employed full time
- Employed part time
- Seasonal or temporary work, when available
- Unemployed looking for work
- Unemployed not looking for work
- Retired
- Full time student
- Disabled

Q11 How would you describe your **MTurk work**?

- It is my full time job
- It is my part time job
- I use MTurk for extra cash or as a hobby
- I rarely use MTurk

**Appendix C: Career Barriers Inventory-Revised (CBI-R)**

**CAREER BARRIERS INVENTORY – Revised**

**Measure Redacted**

**Appendix D: Occupational Engagement Scale-Student (OES-S)**

**Occupational Engagement Scale-Student**

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**Measure Redacted**

**Appendix E: Career Futures Inventory-Revised (CFI-R)**

**Career Futures Inventory-Revised**

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**Measure Redacted**