A LONGITUDINAL EXAMINATION OF THE RELATIONSHIP BETWEEN SOCIOPOLITICAL DEVELOPMENT AND VOCATIONAL OUTCOMES IN EMERGING ADULTHOOD

by

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A DISSERTATION

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DISSERTATION ABSTRACT

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Emerging adulthood is a developmental period marked by profound change socially, emotionally, and vocationally. The emerging adult vocational development process is characterized by dramatic individual growth that is influenced by many factors. Scholars have found that sociopolitical development exerts influence over adolescents' vocational development, but little is known about whether sociopolitical development exerts similar influences over emerging adult vocational development. The present study builds upon extant adolescent and emerging adult literature to consider the longitudinal stability of, and relationship between, sociopolitical and vocational development for emerging adult populations. The primary aim was to utilize existing self-report survey data (Project Alliance 2 [PAL2]) collected from 456 emerging adults to test three objectives: (a) examine the stability of sociopolitical development and vocational outcomes of emerging adults ages 20 to 23, (b) explore if there is a predictive rel ationship between emerging adults' sociopolitical development and vocational outcomes over time, and (c) examine whether race/ethnicity, sex, and postsecondary education moderate the relationship between emerging adults' sociopolitical development and vocational outcomes. The overarching goal of this study was to increase scholarly understanding of the stability of sociopolitical and vocational development across emerging adulthood.

Additionally, scholars hoped that study findings would verify whether, similar to adolescents, sociopolitical development and vocational outcomes predicted one another for emerging adults. Study results demonstrated that sociopolitical and vocational development are stable for a majority of emerging adult subgroups. Furthermore, findings indicated that these two constructs do not predict one another during emerging adulthood. Implications for practice and research are discussed to expand and diversify research on emerging adulthood.

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I: INTRODUCTION

Emerging adulthood, a distinct developmental stage between adolescence and adulthood (18 to 25 years of age; Arnett, 2007), is a period marked by significant change and transition with regards to identity exploration and development, vocational activities, and relationships (Arnett, 1997, 2000, 2004; Arnett et al., 2011; Bynner, 2005; Creed & Hughes, 2013; Guichard et al., 2012; Schwartz et al., 2005). Emerging adults' successful negotiation of these transitions is essential for long-term adjustment and well-being (Anderson & Fleming, 1986; Arnett & Schwab, 2012; Edidin, 2010; Hope et al., 2015; Kins et al., 2013; Wood et al., 2017). Due to the shift in how 18- to 25-year-olds transition into adulthood, a robust literature has emerged to facilitate our understanding of this distinct developmental period; however, there remains a dearth of research that examines how the vocational development process and the transition into the world of work differs now than previous generations of 18-25-years-olds (Arnett, 2000; Hamilton & Hamilton, 2006; Murphy et al., 2010; Polach, 2004; Schulenberg et al., 2004).

The vocational development process is particularly salient during this developmental period. Many emerging adults face the world of work for the first time while they also explore and consider different vocational trajectories (Arnett, 2007; Creed et al., 2009; Creed & Hughes, 2013; Messersmith et al., 2008; Murphy et al., 2010; Olson, 2014; Roisman et al., 2004; Super, 1980). Vocational changes are frequent and notable during this developmental period and these vocational changes impact multiple dimensions of emerging adult well-being (Creed et al., 2009; Galambos et al., 2006; McArdle et al., 2007; Nurmi et al., 2002; Olson, 2014; Patton et al., 2004). Emerging adults, for example, are faced with an increase in possibilities and vocational

opportunities and a decrease of immediate responsibilities when compared to adolescent and adult vocational processes (Murphy et al., 2010). Emerging adults experience more autonomy and flexibility than adolescents; additionally, emerging adults are often not tasked with the responsibility of providing for themselves or their family, as is the case with adults. Consequently, this increase in opportunities and decrease in responsibilities results in a transition from educational experiences to the world of work that drastically differs from previous generations (Murphy et al., 2010). Scholars have spent increasingly more time understanding the vocational development process for emerging adults; however, most research to date is conducted with more homogeneous samples and does not consider vocational development from a longitudinal perspective.

In contrast to the limited research on emerging adult vocational development, research regarding adolescent and adult vocational development is rich. Scholars have made promising contributions to understand how to both reduce barriers and capitalize on supports to promote the vocational development process for these populations. For example, to aid adolescents in their vocational development, scholars have linked vocational theories such as Social Cognitive Career Theory (SCCT; Lent & Brown, 1996, 2013; Lent et al., 1994, 2000) with social justice perspectives, including the sociopolitical development (SPD) process. Traditional career constructs, such as the trait-factor approach (Parsons, 1909), are typically disconnected from contextual factors, such as family, school, culture, and social structures (Blustein et al., 2005; Lent et al., 2002; Bondracek et al., 1986). In order to account for this gap, scholars connect career theories with constructs such as SPD, which encourages individuals to consider and respond to social differences and inequities. Research findings are promising as scholars have

established a positive relationship between adolescent SPD and key vocational development outcomes, ranging from sociocognitive variables, such as greater self-efficacy beliefs, to academic achievement, including higher GPA, and to employment opportunities (Blustein et al., 2005; Diemer, 2009; Diemer & Blustein, 2006; Diemer & Hsieh, 2008; Diemer et al., 2006; McWhirter & McWhirter, 2016). As with adolescents, SPD may be one pathway by which emerging adults can promote greater vocational outcomes, but this relationship has yet to be tested (Diemer, 2009; Wilson, 1996). Therefore, an important contribution of this study is to test the relationship between sociopolitical development and vocational development with a diverse, urban community sample of emerging adults.

Study Purpose

The purpose of this dissertation study was to (a) examine the stability of sociopolitical development (SPD) and vocational outcomes for emerging adults between the ages of 20 to 23; (b) examine if there is a predictive relationship between emerging adults' SPD and vocational outcomes across time; and (c) determine whether contextual factors, specifically postsecondary education (PSE), sex, racial/ethnic identity, moderate the relationship between SPD and vocational outcomes. I used existing Project Alliance 2 longitudinal data (PAL2; DA018374 and HD075150) collected with 415 emerging adults living in an urban, Pacific Northwest area and bivariate autoregressive cross-lagged time-series modeling analyses to achieve these study aims. The following chapter reviews the extant literature regarding emerging adulthood as a distinct developmental period, highlighting the unique vocational development that occurs during this time period. I additionally review the two theoretical frameworks used to guide this study:

sociopolitical development theory and social cognitive career theory. I end a review of the literature with current dissertation aims as well as the three primary study research questions and parallel hypotheses.

II: LITERATURE REVIEW

Emerging Adulthood

Emerging adulthood is a distinct and transitional developmental period that occurs between the ages of 18 to 25 (Arnett, 2007). Scholars proposed emerging adulthood as a new developmental period after decades of research that documented an increase in the age at which individuals engaged in tasks associated with adulthood (Arnett, 2000; Arnett et al., 2011; Gebel & Heyne, 2016; Juárez & Gayet, 2014; Mendoza-Denton & Boum, 2015; Molgat, 2007; Nelson & Chen, 2007). This more novel developmental period is a time in which individuals prepare for the tasks of adulthood, including forming a family, grappling with increased autonomy and independent decision-making processes, procuring stable employment, becoming financially independent, and forming a stronger identity (Arnett, 1998; 2000; 2004; 2007; Erikson, 1968).

Identity development is a particularly salient process during emerging adulthood (Arnett, 2000; Bynner, 2005; Nelson & Chen, 2007; Syed & Azmitia, 2008). Emerging adults increase their self-focus in order to explore their identity statuses in a number of personal (e.g., sexual orientation, relationships, religious beliefs, worldviews, values, and beliefs, etc.) and professional areas (e.g., career interests and goals; Arnett & Tanner, 2006). Emerging adults examine and consider worldviews other than those that they may have formed during childhood and which their parents, guardians, and childhood peers influenced. In addition, emerging adults test various preferences and values (Arnett, Kloep, Hendry & Tanner, 2011; Marcotte, 2008) and attempt to answer questions such as, “Who am I?” and “What is my place in society?” (Nelson & Barry, 2005).

Emerging adulthood has been described as a transitional delay between adolescence and adulthood (Arnett, 2000; Gebel & Heyne, 2016; Juárez & Gayet, 2014; Mendoza-Denton & Boum, 2015; Nelson & Chen, 2007). One domain of development marked by transitional delays is emerging adults' relationships, including romantic relationships and relationships with primary caregivers. Historically, individuals married after high school or college, committing to families and jobs immediately after completing high school and/or postsecondary education, with little time dedicated to exploring their own interests (Bachman et al., 1997; Bynner, 2005; Van Poppel & Nelissen, 1999). Today, individuals between their late teens to early twenties, particularly those with greater socioeconomic stability, spend more time in school, marry later, and have children later (Arnett, 1998; Bynner, 2005; Cohen et al., 2003; Goldscheider & Goldscheider, 1994). The average age of marriage in the United States reflects the delay or shift in individuals marrying later. In 1970, the average age of marriage was 20.8 years for women and 23.2 years for men. By 2018, the average age of marriage rose to 27.8 years for women and 29.8 years for men (Arnett, 2000; U.S. Bureau of the Census, 1998; 2018). This suggests that fewer emerging adults are focusing primarily on pursuing romantic relationships and starting families but instead take time to explore individual interests such as having a "gap year" where they travel or pursue more adventurous occupational or educational interests (Arnett & Padilla-Walker, 2015).

Emerging adults' relationships with their parents and primary caregivers are also changing during this distinct developmental period. Emerging adults start to pursue autonomy from their parents, but simultaneously need and seek parental support for longer periods of time than what has been documented with previous generations (Arnett,

2006). For example, emerging adults remain in parental homes longer and are more likely to return to parental homes temporarily, after having moved out (Cohen et al., 2003; Goldscheider & Goldscheider, 1994). For example, in 2012, 50% of emerging adult women and 59% of emerging adult men lived at home with their parents during or after college (Vespa et al., 2013). Parents dedicated an average of 367 hours per year to supporting their independent emerging adult children (Schoeni & Ross, 2005). An examination of the present dissertation study sample - Project Alliance 2 sample (PAL2; Stormshak et al., 2009) – showed that more than 62% of parents reported loaning money to their child regardless of their child's living arrangements (McCarthy et al., 2015). Such trends indicate that parental support, which fosters both connectedness and independence, may be vital to promote a smooth transition from adolescence to adulthood.

Vocational development is another domain in which emerging adults experience great transition and notable delays in comparison to previous generations. To be expected, emerging adults' vocational development is affected by the changes in their relationships and autonomy (Padilla-Walker et al., 2012; Goldscheider et al., 2001). With less pressure to contribute to secure stable housing independently or maintain a steady income, for example, young adults with increased parental support and fewer familial responsibilities may prolong their pursuit of vocational goals. For example, more young adults postpone accepting any type of gainful employment (e.g., part time jobs) in order to wait for opportunities that better fit their long term goals and offer higher pay (Padilla-Walker et al., 2012). Increased parental support, delays in familial attainments, and other contextual factors have changed how and when emerging adults transition into the world

of work, which in turn impacts their longer-term vocational development (Arnett, 2000; Arnett et al., 2001; Blustein et al., 1989).

Vocational Development during Emerging Adulthood

A critical dimension of emerging adults' identity exploration, and the focus of this dissertation study, is their vocational development. One's vocational development is best understood from a relational perspective (Whiston & Keller, 2004); that is, the vocational development process is influenced by all contextual experiences. Past experiences predict future links between personality traits and associated vocational patterns, decisions, and outcomes (Bordin et al., 1963). For example, vocational development processes are closely linked with individuals' relationships with parents, peers, and others with whom they might encounter (Oppedal et al., 2017). Emerging adults learn about the world of work from their parents and teachers, for example; the interaction between individuals and older adults in their community influence how they foresee their own vocational future.

Vocational development is also an interactive process in that the individual is influenced by and influences the social, cultural, and environmental contexts (Whiston & Keller, 2004). Thus, vocational development is a broad and complex process that begins in childhood, when a child begins to link familial standards and expectations with vocational prospects, and continues throughout life (Messersmith et al., 2008; Whiston & Keller, 2004). Various relationships and contexts continue to play a role in one's vocational development across the lifespan. With that said, emerging adulthood is very important for vocational development because it's the first time individuals can both critically and realistically think about their future job prospects.

With unique educational and interpersonal experiences (e.g., changing majors, graduate school, volunteer jobs, travel), emerging adults start to identify their career-related skills, interests, and goals (Nelson & Barry, 2005). Many emerging adults enter the workforce or college for the first time and face vocational transitions and decisions with greater independence and freedom than awarded during adolescence (Arnett, 2007; Kins et al., 2009; Levitt et al., 2007; Nelson et al., 2007). Emerging adults are able to explore various vocational options as they change majors more frequently; attend graduate school – often in fields different from their undergraduate paths; participate in short-term volunteer jobs (e.g., AmeriCorps, PeaceCorps, Teach for America, etc.); and travel as part of educational or work experiences (Arnett, 2000; Nelson & Barry, 2005). Emerging adults also dedicate more time to understand how to make work-related decisions that will integrate their individual skills and abilities and help them build a positive foundation for future vocational development and job prospects (Berzonsky, 1989; Kurtines et al., 1992; Nelson & Barry, 2005). Each of these unique exploration activities affects emerging adults' vocational development differently; therefore, scholars have dedicated more time to understand how unique experiences as well as contextual and demographic factors influence the vocational development process (Whiston & Keller, 2004).

Work and positive vocational development are critical to emerging adult overall well-being (Blustein et al., 2002; Hamilton & Hamilton, 2006; Luyckx et al., 2010; Roberts et al., 2003). Scholars have linked vocational development to overall well-being constructs such as higher life satisfaction (Hirschi, 2011, 2012; Hirschi & Herrmann, 2012); self-esteem (Munson, 1992; Patton et al., 2004; Turner et al., 2011);

conscientiousness (Hirschi, 2012); and proactive behaviors (Turner et al., 2011). Moreover, greater vocational development promotes an increase in planning future vocational goals that suits one's abilities and skills (Luyckx et al., 2010); career salience (e.g., participation, commitment, and values expectations; Munson, 1992); career-decision making self-efficacy (Creed & Patton, 2003; Luzzo, 1995; Nauta & Kahn, 2007; Powell & Luzzo, 2011); differentiation of career interests (Nauta & Kahn, 2007); commitment to future academic and vocational goals (Creed & Patton, 2003; Nevill & Super, 1988; Patton & Creed, 2011; Powell & Luzzo, 2011); and goal completion behaviors (Aiken & Johnston, 1973; Hargrove et al., 2002). Additionally, greater engagement in vocational development activities predicts higher career satisfaction (Super, 1977; Hirschi & Herrmann, 2012); clarity, coherence, and stability of perceived occupational motivation and abilities (Skorikov & Vondracek, 2007); academic achievement and persistence in college (Blinne & Johnston, 1998); academic engagement (Wong & Kaur, 2017); and, integration across other development domains thus contributing to a more integrated sense of self (Borgen et al., 1996; Powell & Luzzo, 2011; Roisman et al., 2004; Skorikov & Vondracek, 1998). Because vocational development supports emerging adult growth and well-being in multifaceted ways, educators, scholars, and interventionists alike have recognized emerging adulthood as a key time period during which this process can be encouraged. Because college campuses are rich with emerging adults, researchers devote much attention to understanding the vocational development process for emerging adults in college (e.g., Adams & Fitch, 1983; Grossman et al., 2008; Mayhew et al., 2016; Nelson et al., 2010). Research with college student samples is particularly valuable information because the college

environment provides a unique context for vocational exploration, pursuit of vocational opportunities, and vocational support (Luyckx et al., 2007).

Emerging adults who have not yet pursued postsecondary education (PSE) do so even earlier than those who are college-bound (Arnett, 1997, 2000). Non college-bound emerging adults are just as likely as their majority counterparts (e.g., college-bound emerging adults) to begin exploring and establishing new beliefs and values related to their vocational selves; yet, very little scholarly attention has been given to the vocational development of this population (Arnett, 1997, 2000). Greater understanding of what promotes the vocational development for a broad population of emerging adults, especially those pursuing a range of vocational and educational pathways, is warranted and necessary to foster better transition, adjustment, and overall well-being for all emerging adults.

Vocational Development Barriers and Sociopolitical Development

Scholars acknowledge that the vocational development process significantly differs, and is typically more challenging, for individuals from marginalized communities (e.g., poor youth of color, females, and non-college bound youth) in comparison to their more affluent, White, male, and/or college-bound counterparts. There are various reasons for these differences but two primary reasons are (1) most theoretical conceptualizations of the vocational development process assume a degree of choice in one's vocational options and, correspondingly (2) U.S. vocational institutions and services are designed to support those with the most vocational choices, individuals with wealth, who speak English as their first language, and who adhere to westernized ideals and beliefs about work pursuits and achievements (Blustein et al., 2005; Byars & McCubbin, 2001;

Diemer, 2009; Ferriman et al., 2009; McWhirter, 1997; Patton et al., 2004; Worthington et al., 2005).

Individuals from marginalized communities face sociopolitical barriers such as structural racism and discrimination (Alexander, 2012; Dovidio et al., 2002; Quillian, 2006); social and economic inequalities such as ethnic and gender wage and earning gaps (Ali et al., 2005; Brown, 2000; Fouad & Brown, 2000; Nazroo, 2003); differential opportunities in the labor force (Worthington et al., 2005); and inequitable access to educational and economic resources such as high student to teacher ratios and food deserts (Brown, 2000; Constantine et al., 1998; Diemer, 2009; Turner & Lapan, 2003). These factors create inequities in individuals' access to vocational information, opportunities, and ultimately, achievements. Such sociopolitical barriers and inequities can limit the vocational development process for emerging adults of diverse backgrounds including women, ethnic minorities, and those who do not pursue postsecondary education. Therefore, it is important to understand the vocational development process for emerging adults as a whole, but especially for those who experience greater sociopolitical barriers and inequities. Greater knowledge of how minority populations navigate their vocational development will help inform future interventions designed to support such vulnerable populations.

Historically, vocational development theories have not captured how contextual and sociocultural factors influence individual vocational development. Traditional vocational theories (e.g., trait-factor theory; Parsons, 1909) do not account for systemic oppression and marginalization, for example, experienced by marginalized populations. In response, scholars developed vocational development theories, such as Relational

Theory of Working (Blustein, 2011), Career Adaptability Theory (Savickas, 1997), and Social Cognitive Career Theory (SCCT; Lent & Brown, 1996, 2013; Lent et al., 1994, 2000), that address more thoroughly how contextual factors affect the career development process. SCCT is the primary theory that informed my dissertation research questions; therefore, in the following sections, I detail SCCT and the two sociocognitive vocational outcomes (career-related self-efficacy and future career orientation/career outcome expectations) that are of focus for this study.

Social Cognitive Career Theory

The social cognitive career model is particularly useful as it provides a multidimensional lens through which we can understand one's job satisfaction. The social cognitive career model considers core social cognitive variables (e.g., self-efficacy and future career orientation/career outcome expectations, discussed further below) jointly with personality/affective trait and contextual variables that have all been linked to overall job satisfaction (Lent & Brown, 2006). Figure 1 depicts the overall SCCT model and highlights the sociocognitive vocational variables that were the focus of this dissertation study.

SCCT is divided into two corresponding levels: cognitive-personal variables and additional contextual variables that influence career-related interests and choice behaviors (Lent et al., 2000). Contextual variables as outlined by SCCT include physical attributes, such as sex, race, disability status and age as well as environmental features and learning experiences. Like cognitive-personal variables, contextual variables influence several different career development outcomes such as, career-related interests, goals, and choice behavior (Gibbons & Shoffner, 2004; Lent et al., 1994).

Figure 1. Model of Social Cognitive Career Theory

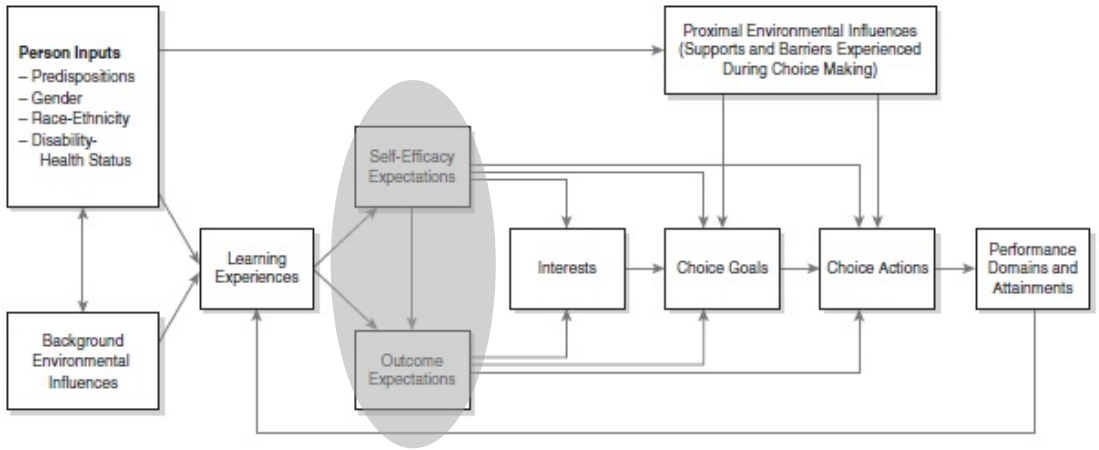


Figure 1. Overall SCCT model adapted from Lent, Brown, and Hackett (1994, p. 93). This figure highlights the two sociocognitive vocational outcome variables of interest (career-related self-efficacy and outcome expectations.

Social cognitive-personal variables include career-related self-efficacy, outcome expectations, and personal goals that promote an individual's ability to exercise their own agency when it pertains to their vocation-related choices, behaviors, and actions (Lent et al., 2000). Self-efficacy and outcome expectations are the focus of this dissertation study. In the following sections, I identify the theoretical definitions of these two variables. In addition, I document the empirical relationship between these two variables, other SCCT variables, and distinguish relevant career outcomes.

Career-Related Self-Efficacy

Self-efficacy beliefs refer to one's judgments of their own capabilities to execute certain behaviors or action items, often in work/career specific contexts (Betz et al., 1996; Lent & Brown, 1996). According to SCCT, success experiences, particularly as they pertain to work-related and vocational achievement, tend to increase career-related self-efficacy beliefs (Chartrand & Rose, 1996; Lent & Brown, 1996). As one witnesses others successfully complete a work-related task, they might begin to believe that they too have

the skills and capabilities to successfully complete that same task (Bandura, 1977; Bandura et al., 2001). As an individual masters the skills and competencies connected to work-related tasks, they will experience positive psychological responses (e.g., excitement, triumph, pride, etc.; Bandura, 1977; Diegelman & Subich, 2001). This process ultimately increases one's career-related self-efficacy beliefs and they will pursue more challenging work-related tasks as their self-efficacy beliefs increase (Bandura, 1977; Diegelman & Subich, 2001). Therefore, pursuing career-related activities, success experiences, positive psychological responses, and self-efficacy beliefs is a cyclical process.

Researchers have tested career-related self-efficacy with a diverse array of populations, including adolescents from lower social class backgrounds, adolescents who identify as gender and ethnic minorities, adults who are employed, adults with disabilities, and adults across the sexual orientation spectrum. There are several key findings regarding self-efficacy research conducted with adolescents and adults. For example, career-related self-efficacy predicts higher academic performance (Gore, 2006; Lent et al., 1986), career decidedness (Betz & Voyten, 2012; Restubog et al., 2010; Taylor & Popma, 1990), perceived range of career options (Betz & Hackett, 1981; Lent et al., 1986; Rotberg et al., 1987), employment (Bradley & Roberts, 2003; Regenold et al., 1999), as well as persistence and motivation toward career-related interests and goals (Cherian & Jacob, 2013; Lent et al., 1986). While there is research that links positive outcomes with self-efficacy for adolescent and adult populations, there is only limited literature that validates such relationships for emerging adult populations (Murphy et al., 2010).

One study with a sample of 187 college students found that emerging adults with greater self-efficacy beliefs reported greater knowledge of and commitment to work-specific roles (Basuil & Casper, 2012). This finding is particularly important as it suggests emerging adults with higher self-efficacy may be more successful in their transition to the world of work as they are equipped with more knowledge of what to expect. Further, they may be more effective at managing their work roles later in life because they reflected on future work and life roles early on (Basuil & Casper, 2012). As college students, this sample of emerging adults is at an advantage; college campuses often offer interventions (e.g., career counseling, internships, volunteer opportunities, recruitment events) to promote success in future work-related domains. While, such opportunities may not be available to emerging adults not pursuing postsecondary education, another study validated the role that self-efficacy plays in overall well-being for emerging adults. A study of 136 emerging adults – each with varying degrees of educational levels – found that self-efficacy was positively related to managing multiple roles (spouse/partner, parent, leisurite, friend, and worker) in the future (Roche et al., 2017). This suggests that targeting emerging adults' self-efficacy beliefs may enhance their consideration of and ability to balance multiple roles in the future, which will contribute to a smooth transition to adulthood.

Given the tumultuous transitions emerging adults face, and the careful consideration of one's future vocation during this period, scholars are filling gaps in what we know about emerging adult vocational development. Particularly, scholars have considered self-efficacy and its influence on emerging adult vocational development, including achievement, persistence, and work-life balance. Decades of research shows

that career-related self-efficacy plays an important role in adolescent, emerging adult, and adult vocational development. In fact, one meta-analytic review regarding emerging adult vocational development suggests self-efficacy plays a critical role in emerging adult vocational and academic outcomes (Multon et al., 1991). Multon and colleagues (1991) also state their support for additional research on self-efficacy and its role on vocational development to inform interventions that facilitate academic achievement and persistence. While we know greater self-efficacy beliefs have positive impacts on and are beneficial to emerging adults in their vocational development and transition to adulthood overall, we have yet to explore the preceding factors that drive emerging adult self-efficacy beliefs, particularly those who do not pursue postsecondary education and hold marginalized identities. Therefore, this dissertation considers how knowledge and awareness of sociopolitical barriers and inequities influence sociocognitive vocational variables, including career-related self-efficacy beliefs as well as future career orientation.

Future Career Orientation

Career outcome expectations refer to one's beliefs about the consequences or outcomes after performing a behavior or executing a task (Lent & Brown, 1996; Patton et al., 2004). Outcome expectations are linked theoretically to future career orientation. Future career orientation refers to the extent to which one feels hopeful about their future, including short-and long-term career goals (McCarthy et al., 2015). Increased hope and positive attitudes regarding one's vocational future leads to greater beliefs in the effect of their actions to achieve a particular outcome (Swift & Derthick, 2013). Researchers have investigated the relationship between future career orientation and outcome expectations

with adolescent populations, adolescents with learning disabilities, college-bound emerging adults, and emerging adults pursuing graduate degrees (Domene, 2012; Kaminsky & Behrend, 2014; Levi et al., 2013). Scholars link future career orientation with outcome expectations and have additionally found that future career orientation predicts one's proactive career behaviors (Raber & Blankemeyer, 2015; Tolentino et al., 2014), self-efficacy (Davidson et al., 2012); career commitment (Blau, 1985; Suutari, 2003); grade expectations and academic achievement (Levi, et al., 2013); and employment outcomes (Nurmi et al., 2002). Greater outcome expectation beliefs and a more positive future career orientation are other paths by which emerging adults can experience a smooth transition into adulthood.

Scholars have found that outcome expectations, in addition to self-efficacy, are strong predictors of one's actions related to careers. For example, in a study of 350 diverse college students, Betz and Klein Voyten (1997) found that greater outcome expectations reduced one's career indecision and improved one's intentions to engage in career exploratory behavior. This suggests that emerging adults gain insight from and are motived by the outcomes they expect from their actions (Fouad & Guillen, 2006). While the construct of outcome expectations and future career orientation has been established for broad populations, scholars have recently realized that the empirical relationship between these constructs with career-related self-efficacy differs for marginalized individuals when compared to their majority counterparts.

Empirical Research on Self-Efficacy and Future Career Orientation. Career outcome expectations and career-related self-efficacy are theoretically and empirically linked (Betz & Voyten, 1997; Fouad & Guillen, 2006). Similar to self-efficacy, one's

outcome expectations, or beliefs about the consequences of performing a behavior or task (Lent & Brown, 1996), shape future career interests, goals, and behaviors. An individual is likely to feel more hopeful about a future career option if they have witnessed the success of others in similar vocational fields and who have similar identities. Through this process, individuals with marginalized identities are likely to experience a more limited range of options. One's racial/ethnic group, for example, relates to their perceptions of self, including career-related self-efficacy and outcome expectations (Smith et al., 1999; Lee, 1994). As an individual engages in the vocational development process, they continuously evaluate whether the group of people with whom they share an identity with is able (or unable) to achieve academic or vocational pursuits; this constant evaluation influences their self-efficacy beliefs and whether they can achieve similar academic and vocational pursuits (Fordham, 1988; Smith et al., 1999). Furthermore, in the area of professional and vocational attainment, youth often receive messages that convey that opportunities available to them are limited because of their sociocultural identities and/or life experiences (e.g., sex, social class, race/ethnicity, highest education level received; Bowman & Howard, 1985; Smith et al., 1999). There clearly are many influences that impact one's self-efficacy beliefs. Therefore, scholars have considered how to maximize these beliefs to support individuals' vocational development.

One benefit of drawing upon the SCCT model is that it considers multilayered factors contributing to cognitive-personal variables and one's vocational development. For example, differences in demographics, contextual influences, learning and educational experiences, as well as environmental barriers/supports are all considered. To

understand more about the vocational development of traditionally marginalized populations, vocational psychologists started to study the sociopolitical barriers that limit the vocational development for individuals with disabilities (Conte, 1983; Curnow, 1989; Noonan et al., 2004), gender (Chung, 2002; Luzzo, 1995; Luzzo & McWhirter, 2001), racial and ethnic minorities (Flores & O'Brien, 2002; Hackett & Byars, 1996; Luzzo & McWhirter, 2001; Rollins & Valdez, 2006), individuals of diverse sexual orientations (Chojnacki & Gelberg, 1994; Chung, 2003; Dispenza, Watson et al., 2012), and individuals from diverse social class and socioeconomic backgrounds (Ali et al., 2005; Blustein et al., 2002).

As previously discussed, scholars have found that career-related self-efficacy and future career orientation often positively predict one another. However, recent studies have shown that this is not always the case. Fouad and Santana (2017) suggest that systemic barriers (e.g., racism or sexism) may affect one's vocational development via inverse relationships with self-efficacy and outcome expectations beliefs (Chaves et al., 2004; Mattison & Aber, 2007; Rollins & Valdez, 2006). For example, one study found that despite perceiving higher social support from teachers, peers, and parents, Latinx adolescent populations expressed lower self-efficacy and outcome expectation beliefs than their white counterparts (Navarro et al., 2007). Another study with adolescents of color found that person inputs – specifically gender – impacted outcome expectation beliefs but not self-efficacy beliefs, resulting in an inverse relationship between outcomes expected and self-efficacy beliefs (Fouad & Smith, 1996). Fouad and Guillen (2006) speculate that outcome expectations influence one's career-related intentions and aspirations differently based on various developmental stages, contextual factors, or

subject areas (e.g., math and science versus arts and humanities). Therefore, it has become increasingly more important to consider distinct and preceding contextual factors that influence self-efficacy and outcome expectation beliefs differently for marginalized populations (Fouad & Santana, 2017).

This body of research illustrates the deleterious effect of sociopolitical barriers on vocational development. For example, sociopolitical barriers threaten an individual's exposure to learning experiences that are critical to the vocational development process (Lent & Brown, 1996, 2013; Lent et al., 1994, 2000; Messersmith et al., 2008). Gender-normed socialization experiences narrow the vocational interests and goals women set for themselves, stifle their vocational achievements, and impede the overall vocational development process. When this happens, scholars have found that women limit themselves to consider occupations traditionally held by women, rather than considering occupations in male-dominated fields (Bandura et al., 2001; Betz, 1994; Betz & Fitzgerald, 1993; Chung, 2002; Gushue & Whitson, 2006; Luzzo, 1995; McWhirter, 1997; Patton et al., 2004; Schoon & Polek, 2011). Furthermore, youth learn about future job prospects by observing their parents and other adults in their communities (Gottfredson, 1981; Messersmith et al., 2008; Savickas, 2005; Super 1980). Youth impacted by poverty, racism, xenophobia, and other forms of marginalization are socialized to consider only the limited range of jobs that exist within their community, thus restricting their vocational goals and interests (Constantine et al., 2011; Diemer, 2009; Ihlanfeldt & Sjoquist, 1990). Marginalized youth who face greater sociopolitical barriers also expect lower-paying and lower-status occupations in the future (Diemer, 2009). In sum, the sociopolitical barriers that marginalized youth and adults face

jeopardize sociocognitive vocational variables such as career-related self-efficacy and vocational outcome expectations (Diemer, 2009). Furthermore, since these variables are essential to the vocational development process, any threat to career-related self-efficacy or vocational outcome expectations is a threat to one's long-term vocational development (Lent & Brown, 1996; 2013).

To account for and understand the inequities that threaten the vocational development of marginalized youth and emerging adults, scholars have argued for an integrative social-cognitive lens to consider emerging adult vocational development (Blustein et al., 2005). To achieve this, scholars have used social justice philosophies and macro-level perspectives to articulate the construct and process of *sociopolitical development* (SPD; Blustein, 2001; Blustein et al., 2005; Cook et al., 2002; Fitzgerald & Weitzman, 1992; Watts & Flanagan, 2007; Vera & Speight, 2003). The SPD process encourages individuals and groups to identify and transform the macrosystemic structures that perpetuate oppression, maintain privilege and the status quo, and preserve social inequities (Baluch et al., 2004; Blustein et al., 2005; Motulsky et al., 2014). Such recognition allows individuals to mitigate or overcome barriers and promote equitable experiences, including vocational development experiences, for themselves and others (Blustein et al., 2005). SPD is a primary theory and construct of this dissertation study. In the next section, I provide an overview of SPD theory and empirical research documenting the positive relationship between SPD and vocational development.

Sociopolitical Development Theory

Sociopolitical development (SPD) has been identified by some scholars as the "antidote" against barriers of structural oppression (Watts, Griffith, & Abdul-Adil, 1999).

The SPD of adolescents, in particular, and its impact on academic, career, and health outcomes has been studied more recently. The theoretical model for SPD (Figure 2; Watts & Flanagan, 2007) was inspired by Paulo Freire's (1973) articulation of *concientización*, or critical consciousness (Chronsister et al., 2020; Chronister & McWhirter, 2006). Critical consciousness is "the capacity to recognize and overcome sociopolitical barriers" (Diemer & Blustein, 2006, p. 220) and includes both the critical analysis of structural and social inequities, as well as the individual and collective actions taken to change such inequities (Diemer et al., 2017; Freire, 1973; Watts et al., 2011). SPD is the process by which one develops greater critical consciousness of their relationships with sociopolitical and systemic oppression, becomes motivated to reduce structural inequality, and takes action to produce social change and equity (Diemer et al., 2017; Diemer, & Blustein, 2006; Diemer, & Hsieh, 2008).

SPD theory articulates a three-step process that promotes greater critical consciousness. The three steps are: (1) understanding the current social, cultural and political forces, (2) questioning the impact these forces have on society and thus, the individual's status within society, and (3) committing to an alternative vision and active engagement in seeking a more equitable society (Mustakova-Possardt, 1998; Watts & Flanagan, 2007). To effectively engage in all three steps, scholars have identified four necessary components: (1) worldview and social analysis, (2) a sense of agency, (3) opportunity structure, and (4), societal involvement behavior (Watts & Flanagan, 2007). Figure 2 depicts the SPD model, which posits that the relationship between component one and four (worldview/social analysis and societal involvement behavior respectively) is moderated by components 2 and 3 (sense of agency and opportunity structure

respectively; Diemer, 2009; Ginwright & James, 2002; Watts & Flanagan, 2007; Watts et al., 2003).

Figure 2. Model of sociopolitical development.

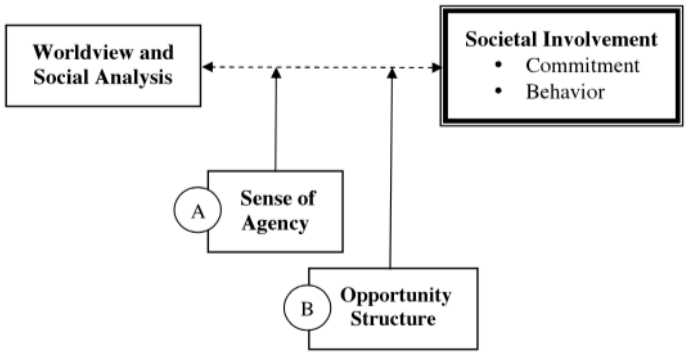


Figure 2. Overall SPD model adapted from Watts and Flanagan (2007, p. 784). This figure highlights the relationship between components 1 and 4 as they are moderated by components 2 and 3.

One's ***worldview and social analysis***, the first component of the SPD process, are the beliefs one holds about the relative contribution of personal behaviors (micro) as well as larger social forces (macro) to current social conditions and contexts (Flanagan & Campbell, 2003; Flanagan & Tucker, 1999; Owen & Dennis, 1987; Watts & Flanagan, 2007). A microsystemic view considers how individual strengths and limitations influence social conditions while a macrosystemic view considers the ineffective or oppressive institutions contributing to social conditions (Watts & Flanagan, 2007). ***A sense of agency***, the second component, includes personal, political, and collective efficacy to create change. This component also considers one's overall sense of empowerment to create change. A greater sense of agency is a positive outcome of the SPD process. That is, a greater sense of agency implies a greater belief in one's capacity to create a more equitable context (Hart & Atkins, 2002; Laird, 2003; Watts & Flanagan, 2007; Zimmerman & Rappaport, 1988). A sense of agency can also include collective

efficacy, which is the belief that a group or community can work together to pursue shared aspirations or address a common concern (Galston, 2001; Watts & Flanagan, 2007; Watts et al., 2003).

Opportunity structures, the third component of SPD, comprise the resources available to an individual or group to pursue a more equitable context. Opportunity structures are the institutional structures and people (e.g., mentorship and organizations) through which one can share common aspirations and concerns (Furlong et al., 1996; Roberts, 2009; Thomas et al., 2014). An example of how opportunity structures differ across contexts includes the disparate number of community-based organizations and agencies available when comparing wealthier neighborhoods to lower-income neighborhoods (Serrano-García & Lopez-Sanchez, 1992; Watts & Flanagan, 2007). For example, an individual might believe there are micro and macro influences that contribute to inequitable circumstances. Based on this belief, they may feel increasingly more motivated to promote change. However, due to the disparate number of opportunity structures (e.g., no other community members who share this belief), that individual will have only limited ability to engage in conversation about how to promote change with like-minded individuals. This lack of opportunity structure stifles the SPD process because this individual may feel helpless and overwhelmed to promote change and consequently their motivation to make changes may be diminished.

The fourth component of SPD theory is ***societal involvement behavior***. Along with a greater sense of agency, societal involvement is another positive outcome of the SPD process. This accounts for behaviors such as committing to community service (signing up and designating time/effort), civic engagement (conventional involvement in

social and political institutions), and/or sociopolitical activism (Corning & Myers, 2002; Klandermas & Oegema, 1987; Prilleltensky, 2003; Watts & Flanagan, 2007). With greater societal involvement behavior, more changes can be made to pursue a more equitable environment.

Empirical Research on Sociopolitical Development and Vocational Development

Scholars have found that promoting SPD fosters positive academic and vocational outcomes for marginalized youth (e.g., Campbell & MacPhail, 2002; Diemer & Li, 2011; Zimmerman et al., 1999). Research conducted with adolescent populations link SPD with desired outcomes such as positive educational outcome expectations and school achievement (Luginbuhl et al., 2016). Engaging in the SPD process empowers youth to excel in their educational pursuits as over time, barriers do not seem so unsurmountable; additionally, scholars speculate that in part, their motivation is fueled by the recognition of the sacrifices and challenges their parents faced to provide them with better opportunities (Hill & Torres, 2010: Luginbuhl. et al., 2016; McWhirter et al., 2013). Youth, especially children of immigrant parents, are motivated to please their parents who have made sacrifices and to take advantage of the novel opportunities available to them (Luginbuhl et al., 2016). Additionally, as youth reap the benefits of their own hard work and recognize their own skills and capabilities, they are able to overcome societal norms and messages received regarding limited future vocational prospects available to them (Blustein et al., 2005; Diemer, 2009). Thus, they are able to both (1) form occupational goals and interests that are unique to them and (2) feel confident to overcome any barriers that pose as threats to these goals (Blustein et al., 2005). Furthermore, scholars have linked greater SPD with higher achieving vocational goals,

including higher-paying and higher-status occupations (Diemer, 2009; Diemer & Blustein, 2006; Diemer & Hsieh, 2008; O'Connor, 1997).

Adolescent SPD has also been linked positively with SCCT outcomes for adolescents, including future career expectations and career-related self-efficacy. With a sample of 220 adolescents, Diemer and Blustein (2006) found that youth with greater levels of sociopolitical analysis and control experienced greater clarity regarding their vocational goals and interests, greater commitment to their future careers, and considered work to be a more significant part of their future. With a sample of 25,000 adolescents of color from lower socioeconomic backgrounds, Diemer and Hsieh (2008) assessed the relationship between one's capacity to cope with sociopolitical inequity (e.g., sociopolitical development) with their future vocational expectations. Authors found that SPD was positively associated with future vocational aspirations and resulted in a smaller gap between their vocational aspirations and expectations. Similarly, McWhirter and McWhirter (2016) considered the relationship between Latina/Latino youth's SPD, educational persistence, and vocational development. Findings showed higher SPD was positively associated with Latino/a youth's future goals to attend postsecondary education and higher vocational outcome expectations (McWhirter & McWhirter, 2016). Such findings suggest that adolescents with a stronger awareness of and commitment to addressing inequity are more invested in doing well in school, pursuing their academic goals, and more committed to their vocational future. To date, this body of research has been primarily correlational in nature and collected only at one time point. Scholars have sought, therefore, to examine SPD and career outcomes longitudinally and to examine

how interventions that target SPD may influence later career outcomes (Diemer 2009; Diemer et al., 2006; Diemer et al., 2010; Watts et al., 1999).

In the only study to examine vocational developmental outcomes and SPD longitudinally, Diemer and colleagues (2010) examined over time the SPD and vocational expectations for African American, Latin American, and Asian American youth from lower socioeconomic backgrounds. Diemer and colleagues (2010) target the relationship between SPD, work salience, and vocational expectations. Diemer and his colleagues (2010) found that 10th grade SPD predicted 12th grade work-salience and 12th grade vocational expectations for all three samples. Based on these results, the authors argued that SPD may facilitate the negotiation of sociopolitical barriers, which positively impacts the vocational development of youth of color (Diemer et al., 2010). Additionally, the authors note that the results of their study suggests that a greater consciousness and motivation to transform sociopolitical inequities may facilitate the formation of vocational expectations and a greater connection to work in adulthood (Diemer et al., 2010).

Scholars have also examined the effect of SPD on African American male adolescents. Using qualitative methods, O'Connor (1997) examined the SPD and educational resilience of six, low-income, African-American adolescents. The author found that greater SPD about issues of race, class, and gender facilitated African American adolescents' academic success and motivation to pursue future career goals. The author noted that many participants acknowledged significant figures in their lives who they witnessed actively resisting social injustices to produce positive change. For example, one participant noted a caretaker confronting a teacher when the youth became

involved in a race-based school incident. The author further noted that these role models demonstrated strategies that the participants could adopt, which allowed these participants to circumvent or negotiate sociopolitical barriers and constraints for themselves in the future (O'Connor, 1997). This qualitative study illustrates the importance of youth engaging in all components (e.g., worldview and social analysis, a sense of agency, opportunity structures, and societal involvement behavior) of the SPD process to reach better vocational outcomes. Zimmerman et al. (1999) examined the effect of SPD with a sample of 172 urban, male, African American adolescents. In this study, authors found that greater sociopolitical control reduced one's hopelessness regarding their future (Zimmerman et al., 1999). O'Connor (1997) and Zimmerman et al. (1999) suggest that SPD, and African American adolescents' knowledge of their struggle, may contribute this population's hope about their futures and their self-efficacy to respond to and overcome vocational barriers, which result in greater vocational expectations and future goals. While it is clear that SPD facilitates positive outcomes for marginalized youth, it is unclear whether similar outcomes are produced for a broader population of adolescents or for emerging adult populations, especially given that emerging adults uniquely navigate the world of work.

In one of the few studies conducted with adults, Chronister and McWhirter (2006) implemented a vocational development intervention designed to facilitate the career development of female partner-abuse survivors by using critical consciousness raising strategies in group intervention settings. As previously described, the theoretical model for SPD (Figure 2; Watts & Flanagan, 2007) was inspired by Paulo Freire's (1973) articulation of *concientización*, or critical consciousness. Critical consciousness is a

process of (1) reflecting on how power is distributed and used in one's life contexts, including situations of abuse and oppressions, and (2) acquiring the skills and motivation to act to change these situations (Chronister et al., 2020). Additionally, scholars have emphasized critical consciousness as an analysis of how sociocultural and sociopolitical contexts influence the distribution of power (Chronister et al., 2020). Because critical consciousness is theoretically linked with SPD, empirical studies involving both constructs are useful in understanding the vocational development process.

With 73 adult women survivors, including emerging adult women, authors experimentally tested the effectiveness of two career interventions (ACCESS and ACCESS Plus) and compared the effects between each intervention and a wait-list control group (Chronister and McWhirter, 2006). The ACCESS intervention included the standard career development curriculum content. The ACCESS Plus intervention integrated the standard curriculum with critical consciousness-raising techniques. These techniques included "six identified strategies for enhancing critical consciousness to facilitate participants' awareness and understanding of the effect of domestic violence on their career development, social contexts, and power dynamics in their lives" (Chronister & McWhirter, 2006, p. 155). Participants who completed the ACCESS Plus intervention had increased critical consciousness at posttest and follow-up in comparison to wait-list control and ACCESS participants. Furthermore, at the follow-up, ACCESS Plus participants made more progress toward their vocational goals when compared to wait list or ACCESS participants (Chronister & McWhirter, 2006). Additional research regarding the ACCESS intervention with both English- and Spanish-speaking adult intimate partner abuse survivors established positive relationships between increased critical

consciousness and optimistic vocational and mental health outcomes (Chronister et al., 2012; Chronister et al., 2008; Davidson et al., 2012). Such results suggest that critical consciousness, and SPD by association, may support emerging adult and adult populations in achieving their career-related goals and vocational pursuits.

This extant body of research, conducted primarily with adolescents, indicates a positive relationship between SPD and vocational outcomes. Critical awareness of sociocultural barriers, inequities, and oppression facilitates the development of one's self-efficacy to overcome such barriers, hopefulness about future and available vocational options, and vocational outcomes including goal commitment and academic and vocational achievement.

Summary and Study Contributions

Emerging adulthood is a unique developmental stage between adolescence and adulthood (18 to 25 years of age; Arnett, 2007). Emerging adults are particularly vulnerable as they undergo significant change and transitions in identity exploration and development, including vocational development (Arnett, 1997, 2000, 2004; Schwartz et al., 2005). Scholars have applied vocational theories such as Relational Theory of Working (Blustein, 2011), Career Adaptability Theory (Savickas, 1997), and Social Cognitive Career Theory (SCCT; Lent & Brown, 1996; Lent et al., 1994) to better understand the vocational development process for emerging adults.

Historically, vocational psychologists were concerned primarily with the working lives of those who are well-educated and experience a degree of choice in their vocational options (Blustein et al., 2005). More recently, scholars have recognized that sociopolitical forces cause the vocational development process to differ for those from marginalized

backgrounds (Blustein et al., 2005). SCCT has become a primary model to understand the vocational development process for marginalized populations as this model links sociocognitive vocational factors (e.g., self-efficacy, outcome expectations, future career orientation) with contextual factors (e.g., race, gender, educational experiences, etc.) to understand long-term vocational outcomes (e.g., interests, goals, and goal attainment).

Given the differences in contextual factors and sociopolitical forces that marginalized populations experience (e.g., sexism, racism, ageism, ableism, etc.), scholars are committed to understanding how SPD, or the critical understanding of forces that shape status in society and the action to promote change, can facilitate individual vocational development (King & Madsen, 2007; Watts et al., 2003). To date, scholars have considered the relationship between SPD and vocational development in adolescent populations and found that greater awareness of social inequities and efficacy to overcome sociocultural barriers is linked with improving sociocognitive vocational outcomes, including career-related self-efficacy, future career outcome expectations, and career-related goals, and additionally contributes to one's overall vocational development process. The relationship between SPD and vocational development has not yet been tested with emerging adults, and only one longitudinal study of this relationship has been conducted with adolescents.

This dissertation study marks the first time that the longitudinal relationship between SPD and vocational development outcomes were examined in a diverse, urban sample of emerging adults. It was hoped that study results would increase scholarly understanding of the stability of SPD and vocational development across emerging adulthood as well as the predictive relationship between emerging adult SPD and

vocational development over time. Study findings provide important information about what factors may serve as targets for prevention and intervention, and at what time points, to promote SPD and emerging adult vocational outcomes such that emerging adults achieve their full potential and contribute to a more just society.

Study Aims, Research Questions, and Hypotheses

Study aims were to (a) examine the stability of sociopolitical and vocational development across three time points, from ages 20 to 23, during the emerging adult years; (b) explore if there is a predictive relationship between emerging adults' sociopolitical and vocational development overtime; and (c) examine whether racial/ethnic identity, sex, or postsecondary education moderate the relationship between emerging adults' sociopolitical and vocational development. The following are the three primary research questions and ensuing hypotheses that comprise this dissertation study:

Research Question 1: What is the stability of SPD and sociocognitive vocational outcomes from age 20 to 23 years?

I hypothesized that both SPD and sociocognitive vocational outcomes will remain stable throughout the course of emerging adulthood.

Research Question 2: Do SPD and sociocognitive vocational outcomes predict one another at ages 20, 21.5, and 23?

Consistent with previous applications of SPD theory and SCCT, I hypothesized that SPD will be positively related to changes over time in sociocognitive vocational outcomes. I also hypothesized that sociocognitive vocational outcomes will be positively related to changes over time in SPD.

Research Question 3: Is the strength of the relationship between SPD and sociocognitive vocational outcomes moderated by ethnic/racial identity, sex, and postsecondary education at each time point?

Because the extant SPD and vocational development literatures do not include studies with many emerging adult samples without postsecondary education, I considered this as an exploratory research question with no directional hypotheses.

III: METHODS

Procedure

This dissertation study involved the analysis of data from a large-scale longitudinal randomized prevention trial, Project Alliance 2 (PAL2; Stormshak et al., 2009; DA018374 and HD075150). PAL2 researchers initially recruited participants in the sixth grade, from three different middle schools, in an ethnically diverse metropolitan community in the Northwest region of the United States. At the time of initial data collection, PAL2 researchers approached parents of all sixth-grade students for participation consent using an active consent protocol; 90% of parents consented to participate in the school-based assessment. Overall PAL2 data were collected at eight different time periods. Youth and parents completed questionnaires across a range of topics and received monetary compensation for participating in the assessment at each of the eight study waves.

At wave 1, participants ranged between 11 to 13 years old. For waves 1 through 5, PAL2 researchers conducted student surveys using an instrument developed by colleagues at the Oregon Research Institute (Metzler et al., 2001). Survey questionnaires were identical for waves 1 through 5. For these five waves, PAL2 researchers conducted annual assessments in each of the schools. There was a gap in data collection after wave 5 due to funding limitations; data collection was re-initiated at wave 6 when participants were an average of 20-years-old. PAL2 researchers conducted annual assessments between waves 6, 7, and 8. These three waves include the data analyzed in this study.

Once additional funding was secured, PAL2 researchers contacted emerging adult participants via phone, text, and/or email and requested their continued participation.

During waves 6, 7, and 8, PAL2 researchers mailed participants questionnaires and asked the participants to bring the completed documents to the research office or return them via mail. Survey questionnaires were identical between waves 6 through 8. A more detailed description of PAL2 recruitment and randomization procedures are available in literature written by Stormshak and colleagues (2009) as well as Van Ryzin and colleagues (2012).

Participants

This study sample comprised emerging adults from an urban, Pacific-Northwest area who participated in the larger longitudinal study, PAL2 (Stormshak et al., 2009; DA018374 and HD075150). Table 1 provides a summary of participant retention as well as information about the average participant age at each wave. Table 2 provides a summary of participants' self-reported racial/ethnic identity at Wave 6. Table 3 provides a summary of study-relevant participant demographics and corresponding missing data at each study wave.

Table 1

Emerging Adult Age in Years: Mean, Standard Deviation, Range Characteristics

	N (Retention)	*M*	*SD*	Range
Wave 6	415 (74%)	20	0.74	4.75
Wave 7	388 (70%)	21.5	0.70	3.42
Wave 8	360 (66%)	22.9	0.70	3.33

Table 2

Wave 6 Emerging Adult Racial/Ethnic Demographic Characteristics

Characteristics	*n*	*%*
European American	160	35.1%
American Indian-Native American	13	2.9%
African American	69	15.1%
Hispanic-Latino	79	17.3%
Asian American	31	6.8%
Pacific Islander	9	2.0%
Multiracial	95	20.8%
Missing	0	0.0%

Note. Emerging adult N = 456.

Measures

I used data collected from the self-report PAL2 Young Adult Survey (YAS) for all study variables. The same YAS (identical items across all three waves) was administered to participants at approximately age 20 (wave 6), 21.5 (wave 7), and 23 (wave 8).

Demographic Information

Emerging adult self-report demographic information was collected and included: sex, ethnicity, living situation, relationship status, highest level of education completed, as well as employment status and history.

Control Variables

Recent theoretical and empirical work has identified the transition from adolescence to adulthood, known as emerging adulthood, as a period with distinct characteristics (Cohen et al., 2003).

Table 3

Wave 6 Emerging Adult Additional Demographic Characteristics

	Wave 6		*Wave 7*		*Wave 8*	
Characteristics	*n*	*%*	*n*	*%*	*n*	*%*
Sex						
Male	199	43.6%	187	41.0%	172	37.7%
Female	214	46.9%	197	43.2%	185	40.6%
Other	2	0.4%	3	0.7%	3	0.7%
Missing	41	9.0%	69	15.1%	96	21.1%
Highest Education Achieved						
Junior High	6	1.3%	1	0.2%	2	0.4%
Some High School	53	11.6%	1	0.2%	29	6.4%
High School	155	34.0%	37	8.1%	98	21.5%
Some College	194	42.5%	128	28.1%	130	28.5%
Junior College/Associates	5	1.1%	163	35.7%	45	9.9%
College/University Grad.	2	0.4%	40	8.8%	55	12.1%
Graduate, Professional Training, Graduate Degree	0	0.0%	16	3.5%	1	0.2%
Missing	41	9.0%	2	0.4%	96	21.1%
Have You Ever Held a Paid Job?						
Yes	362	79.4%	369	80.9%	352	77.2%
No	53	11.6%	19	4.2%	8	1.8%
Missing	41	9.0%	68	14.9%	96	21.1%
Employment						
Part-Time	171	37.5%	149	32.7%	115	25.2%
Full-Time	79	17.3%	125	27.4%	164	36.0%
Missing	206	45.2%	182	39.9%	177	38.8%
Current Living Situation						
Primarily Self	7	1.5%	14	3.1%	20	4.4%
With Parents	221	48.5%	162	35.5%	134	29.4%
With Relatives	39	8.6%	40	8.8%	34	7.5%

Table 3, continued

	Wave 6		*Wave 7*		*Wave 8*	
Characteristics	*n*	*%*	*n*	*%*	*n*	*%*
With their Child/Children	4	0.9%	6	1.3%	10	2.2%
With Partner	24	5.3%	39	8.6%	58	12.7%
With Partner's Family	11	2.4%	13	2.9%	13	2.9%
With Friends	22	4.8%	38	8.3%	23	5.0%
College Housing	39	8.6%	17	3.7%	6	1.3%
With Roommates	32	7.0%	43	9.4%	45	9.9%
Military	1	0.2%	2	0.4%	1	0.2%
Homeless	2	0.4%	0	0.0%	4	0.9%
Foster Home	1	0.2%	0	0.0%	0	0.0%
Group Home	0	0.0%	1	0.2%	0	0.0%
Substance Use Treatment Home	0	0.0%	0	0.0%	1	0.2%
Other	13	2.4%	13	2.9%	11	2.9%
Missing	42	9.2%	68	14.9%	96	21.1%

Emerging adulthood is generally seen as the period from ages 18 to 25 (Arnett, 2000; Cohen et al., 2003); however, empirical literature suggests that differences in contextual factors can influence the presentation of emerging adult features and developmental tasks regardless of age (Arnett, 2016). Furthermore, preliminary analyses (see Table 5) suggest that age was significantly correlated with key outcome variables including sociopolitical development. Given the variability of participant age in each wave, the correlation of age with key outcome variables, and extant literature documenting how variable emerging adult development is from year to year, I controlled for this variable in the subsequent analyses. There is also theoretical and empirical support to control for participant employment history factors. Extant literature suggests a cyclical relationship between vocational outcomes, including career related self-efficacy, with employability.

Self-efficacy increases with more work experience; similarly, optimism about one's employability increases with greater self-efficacy suggesting a bidirectional relationship (e.g., Dam Van, 2004; McArdle et al., 2007; Nauta et al., 2010). In addition, preliminary analyses (see Table 5) suggest that whether participants had held a paying job was both positively and significantly correlated with SPD. Furthermore, the percentage of participants who reported having a job (either currently or in the past) decreased between waves 7 and 8. This is unexpected as the number of participants who had ever held a job likely stayed constant or increased, rather than decreased as suggested by the data. This decrease is best explained by high rates of attrition. Both the unexpected trends in the data as well as the empirical and extant trends support controlling for variability in participant employment history. As such, data from the following PAL2 survey were used to control for employment status, "Have you ever had a paying job?" and "In the last month, were you working at a job?" Response options for both questions were: (1) *yes,* and (2) *no*.

Emerging Adult Vocational Outcomes

The premise of this dissertation was to understand the bidirectional relationship between sociopolitical development and sociocognitive vocational outcomes for emerging adults. A total of 14 self-report items from the PAL2 YAS were used to create a composite and assess emerging adults' career-related self-efficacy and future career orientation. I conducted a confirmatory factor analysis (CFA) to create the Emerging Adult Sociocognitive Vocational Outcome composite used for this study. This composite is derived from the initial Emerging Adult Career Development model developed by

McCarthy and colleagues (2015) using these same PAL2 data. Additional information about the CFA is provided in the Results section.

Career-related Self-efficacy. I used a 7-item factor to measure participants' *career-related self-efficacy* as defined by SCCT (Lent & Brown, 1996, 2013; Lent et al., 1994, 2000). This factor measures one's beliefs regarding their own capabilities to execute certain behaviors or action items, often in work/career specific contexts (Betz et al., 1996; Lent & Brown, 1996). Participants were prompted with, "in the past 3 months, how often have you felt…." Response options ranged along a 5-point Likert-type scale: (0) *never*, (1) *rarely*, (2) *sometimes*, (3) *often*, (4) *all the time*. Questions included: "confident that in the future you could find a satisfying job or career path," "you have a good sense of your future job or career path," "able to find information about jobs or careers that you're interested in," "able to make important job or career decisions," "confident in your ability to set and achieve short-term goals for yourself," "confident in your ability to set long-term goals for yourself," and "able to find resources and people to help you achieve your job/career goals." Total scores were calculated by averaging the total score for all seven items. Higher total mean scores indicate greater self-efficacy to navigate and achieve future career goals. I calculated an internal reliability coefficient of $\alpha = .911$ with the wave 6 PAL2 sample.

Future Career Orientation. I used a 7-item factor to assess participants' orientation to and hopefulness for their future vocation. For all items, participants were initially oriented with "these questions are about your future and career orientation" prior to answering each item. The first two questions (two items) included, "I can imagine what my life will be like when I'm grown up" and "I can imagine myself being an

important adult in my community." Response options ranged along a 5-point Likert-type scale: (0) *not at all*, (1) *I'm not sure*, (2) *I think so*, (3) *pretty sure*, and (4) *very sure*. The third item included, "I feel confident that I will achieve my goals." Response options ranged along a 4-point Likert-type scale: (1) *Not at all*, (2) *A little*, (3) *Sometimes*, and (4) *A lot*. The fourth item, "I think my future will be positive" was scored on a 4-point Likert-type scale: (1) *Not at all*, (2) *A little*, (3) *Sometimes*, and (4) *Definitely*. The fifth and sixth items, "looking ahead to the next five years, do you think that things in the rest of the world will get better or worse?" and "how do you think your own life will go in the next five years? Do you think it will get better or worse?" were scored on a 5-point Likert-type scale with response options (1) *get much worse*, (2) *get somewhat worse*, (3) *stay about the same*, (4) *get somewhat better*, and (5) *get much better*. The seventh item was, "in the next five years, I feel confident that I will be happy." Response options ranged along a 10-point Likert-type scale from (0) *completely disagree* to (10) *completely agree*. Because response options for each item were on different scales, items were first standardized and then averaged, with higher mean scores indicating greater certainty about the future. I calculated an internal reliability coefficient of $\alpha = .832$ with the wave 6 PAL2 sample.

Sociopolitical Development

Emerging adult SPD was assessed with six self-report items. These six items are a subset of the original 17-item SPD measure created by McWhirter and McWhirter (2016). Authors found support for the validity of the original 17-item measure with a sample of Latina/o high school students but reduced and refined the items in a subsequent study (McWhirter & McWhirter, 2016). Exploratory factor analysis (EFA) results

resulted in a 10-item SPD measure that consisted of a two-factor structure of critical agency (factor 1: seven items total) and critical behavior (factor 2: three items total; McWhirter & McWhirter, 2016). McWhirter and McWhirter (2016) calculated an internal reliability coefficient of $\alpha = .80$ for the critical agency factor and $\alpha = .61$ for the critical behavior factor with the sample of Latina/o high school students.

For the six items used in the YAS survey, participants reported their agreement with the following items: (1) *"Racism and discrimination affect people today,"* (2) *"In the future, I will participate in activities and groups that promote equality and justice,"* (3) "*I talk about community and political issues with friends,"* (4) *"Ethnic minorities are treated as equals today,"* (5) *"I speak up when I see things that are unfair,"* and (6) *"It is important to me to contribute to my community."* Response options for all items were on a 4-point Likert-type scale ranging from (1) *strongly disagree* to (4) *strongly agree*. Scores are derived by calculating the mean across all six items, with one item reverse coded (i.e., "Ethnic minorities are treated as equals today"). Higher scores suggest a higher degree of SPD. I calculated an internal reliability coefficient of $\alpha = .658$ utilizing all six items. Further analyses indicated that by removing item number 4, "*Ethnic minorities are treated as equals today*," the internal reliability coefficient improves to $\alpha = .784$. I hypothesized this to be the case because the remaining five items focused primarily on sociopolitical behavior or action against systemic inequities, rather than on worldviews or beliefs of systemic inequities. Therefore, the items utilized to measure participants' sociopolitical development for the present study are based solely on sociopolitical behaviors or actions and consist of items one through three, five and six.

Moderating Variables

Empirical and extant literature suggests that females, ethnic/racial minorities, and emerging adults without postsecondary education encounter greater sociopolitical barriers, which stifle their vocational development, when compared to majority counterparts (e.g., Byars & Hackett, 1998; Flores, & O'Brien, 2002; Leong & Flores, 2013; Leong & Serafica, 1995; Olson, 2014; Tang et al., 1999). Therefore, I assessed whether one's racial/ethnic identity, sex, or postsecondary education moderates the relationship between SPD and sociocognitive vocational outcomes. Ethnic identity was measured with the YAS item, "What describes your racial/ethnic group? Check all that apply." Response options were: *African American/Black, Asian/Asian American, European American/White, Hispanic/Latino, Native American/Alaskan Native, Pacific Islander,* and *Other (describe).* If participants checked more than one racial/ethnic group, then their ethnic/racial identity was coded as *Multiracial*. Postsecondary education was assessed with the YAS item, "What is the highest level of education you have completed?" Response options were: (1) *7th grade or less*, (2) *Junior high completed*, (3) *Some high school (at least one year)*, (4) *High school (GED, public, private, prep, trade)*, (5) *Some college (at least one year) or specialized training*, (6) *Junior college/Associate degree (2 years)*, (7) *College/University graduation (4 years)*, and (8) *Graduate professional training/ graduate degree*.

For the purposes of reporting study results, we intentionally utilized the term "sex," rather than "gender" to consider the differences in experiences between females and males. From a sociological perspective, "sex" refers to the biological difference between males and females, while "gender" refers to an individual's concept of themselves, more commonly considered as "gender identity" (Deaux, 1985). Sex was

assessed with the YAS item, “What is your gender?” Response options were: (1) *male*, (2) *female*, and (3) *other (describe).*

IV: RESULTS

Preliminary Data Analyses

Preliminary Data

Descriptive analyses were conducted with IBM SPSS version 25.0 for Macintosh computers, and the main analyses were conducted with R version 3.6.1 using structural equation modeling (SEM). Examination of skewness and kurtosis statistics (using a cutoff value of +/- 1.00), in addition to visual inspections of histograms, suggested that distributions for sociopolitical development and the sociocognitive vocational outcome composite approximated normal for all three waves. Mardia's test of multivariate normality suggests that data are multivariate non-normal (314.70, $p < .001$). Inspection of univariate normality show that all key study variables were univariate normal with skewness and kurtosis falling within the ± 2 range (George & Mallery, 2010). I used maximum likelihood estimation with robust (Huber-White) standard errors to handle non-normality (Greco et al., 2014). Item means, standard deviations, and correlations for key study variables across all three waves are displayed in Table 4.

Missing Data

The primary issue with missing data in any longitudinal study is related to attrition (Cumming & Goldstein, 2016). Missing data across all three waves were as follows: approximately 9% of emerging adult responses at wave 6, 15% of emerging adult responses at wave 7, and 21% of emerging adult responses at wave 8 (refer to Table 5 for information regarding missing data by key study variables and each wave). Missing data for the SPD and sociocognitive vocational outcome variables were analyzed by key moderator and covariate variables across all three waves.

Table 4

Means, Standard Deviations, Missingness, and Correlations for all Study Variables

Variable	*M*	*SD*	*Missing %*	1	2	3	4	5	6	7	8	9	10	11	12
1. W6 SPD	3.02	0.55	9.9												
2. W7 SPD	3.09	0.52	16.2	.57**											
3. W8 SPD	3.18	0.55	21.1	.56**	.55**										
4. W6 Voc Comp	1.31	0.66	10.1	.29**	.25**	.27**									
5. W7 Voc Comp	1.31	0.69	16.0	.19**	.25**	.17**	.62**								
6. W8 Voc Comp	1.32	0.69	21.7	.18**	.19**	.25**	.54**	.67**							
7. W6 Age	20.00	8.83	9.0	.02	.01	-.15**	-.04	-.07	-.01						
8. W6 PSE	0.48	0.50	9.0	.22**	.24**	.23**	.16**	.11*	.08	-.14**					
9. W7 PSE	0.57	0.50	14.9	.18**	.22**	.29**	.12*	.12*	.14**	-.16**	.71**				

Table 4, continued

Variable	*M*	*SD*	*Missing %*	1	2	3	4	5	6	7	8	9	10	11	12
10. W8 PSE	0.64	0.48	21.1	.14*	.18**	.25**	.09	.05	.14**	-.17**	.64**	.85**			
11. W6 Sex	4.63	3.49	9.0	.14**	.15**	.15**	.04	.01	-.03	-.05	.22**	.11*	.04		
12. W6 Held Job	0.87	0.33	9.0	.03	.04	-.01	.10*	.08	.17**	.09	.05	.03	-.01	.04	
13. W6 Employed	0.67	0.47	19.1	.09	.11	.10	.00	.03	.08	-.01	.04	.05	.04	.07	.17**

Note. M and *SD* are used to represent mean and standard deviation, respectively. ** $p < .05$, * $p < .01$.
W6, W7, W8 refer to waves 6, 7, and 8 respectively; SPD = Sociopolitical Development, Voc Comp = Sociocognitive Vocational Outcome Composite, PSE = Postsecondary education, Held Job = "Have you ever held a paying job?", Employed = "In the last month, were you employed?" Measure ranges of outcome variables are as follows: SPD: [1, 4], Voc Outcomes: [-1.31, 2.55]. Moderator and covariate variables are dichotomous: PSE (0 = No PSE, and 1 = PSE), sex (1 = Male, and 8 = Female), whether the participant had ever held a paying job (0 = No, and 1 = Yes), and whether the participant was employed in the last month (0 = No, and 1 = Yes).

Table 5 provides missingness information for each moderator and covariate variable. Analyses suggest data were missing at random (Beaujean, 2014). Cases with missing data were retained because main analyses made use of full information maximum likelihood (FIML) to obtain unbiased, efficient parameter estimates despite the missing data. FIML is a common approach for dealing with missing data in structural equation modeling (SEM), and yields results similar to those that would be obtained by multiple imputation approaches (Collins et al., 2001; Graham, 2003).

Table 5

Results of Missingness on Outcome Variables

Variable	χ^2	*t*
W6 SPD		
Age		-.00
Sex	.89	
Ethnic Identity	5.30	
Held a Paying Job	5.03*	
Employed in Last Month	.63*	
Postsecondary education	.00	
W7 SPD		
Age		2.09
Sex	.45	
Ethnic Identity	3.80	
Held a Paying Job	1.45	
Employed in Last Month	5.27*	
Postsecondary education	.31	
W8 SPD		
Age		2.91
Sex	.95	
Ethnic Identity	6.81	
Held a Paying Job	.28	
Employed in Last Month	6.72*	
Postsecondary education	.14	
W6 Voc Comp		
Age		-1.58
Sex	2.09	
Ethnic Identity	4.42	
Held a Paying Job	3.37	
Employed in Last Month	.10	
Postsecondary education	.14	

Table 5, continued

Variable	χ^2	*t*
W7 Voc Comp		
Age		-2.22
Sex	1.94	
Ethnic Identity	4.13	
Held a Paying Job	419.32*	
Employed in Last Month	323.00*	
Postsecondary education	2.82	
W7 Voc Comp		
Age		-1.94
Sex	.443	
Ethnic Identity	6.65	
Held a Paying Job	438.50*	
Employed in Last Month	400.16*	
Postsecondary education	1.25	

Note. χ^2 and *t*-values are used to represent missingness based on categorical or continuous variables. * $p < .05$. W6, W7, W8 refer to waves 6, 7, and 8 respectively; SPD = Sociopolitical Development; Voc Comp = Sociocognitive Vocational Outcome Composite; Held a Paying Job = "Have you ever held a paying job?"; Employed in Last Month = "In the last month, were you employed?".

Measurement Model

The Emerging Adult Sociocognitive Vocational Outcome composite used for the purposes of this study is derived from the initial Emerging Adult Career Development model developed by McCarthy and colleagues (2015) using these same PAL2 data. I used a confirmatory factor analysis (CFA) to test the three-factor model: confidence to pursue career-related activities (career navigation), attitudes towards their future career trajectories (future orientation), and perceived parental support (self-efficacy) found by McCarthy and colleagues (2015) with this PAL2 sample at Wave 6 (McCarthy et al., 2015). Information regarding the three-factor model (McCarthy et al., 2015) can be found

in Appendix A. Emerging adults' perceptions of their parental support was not a focus of this study, therefore, I used CFA to analyze the two pertinent factors: future orientation (e.g., emerging adults' attitudes towards their future career trajectories) and career navigation (e.g., emerging adults' confidence to pursue career-related activities).

The model fit was assessed using lavaan version 0.5-23 (Rosseel, 2012) in R version 3.6.1 (R Core Team, 2016). The goodness-of-fit indices for the 2-dimensional Emerging Adult Sociocognitive Vocational Outcome model were as follows: chi-square statistic, $\chi^2(3) = 547.93$, $p < .001$, CFI = 0.91, and TLI = 0.90, RMSEA = .08, and 90% CI [.07, .09] (Hoyle, 1995), suggesting a good fit with the data. Because the CFA was conducted at wave 6, the linear correlations of the latent emerging adult factors, career related self-efficacy and future orientation, yielded moderate to strong positive strength ($\rho = .580$, $p < .01$; Mukaka, 2012).

Based on a 0.45 factor loading threshold (Yong & Pearce, 2013), I removed a total of two items from the future orientation factor established by McCarthy and colleagues (2015; see Appendix A). My modified three-factor model fit was assessed utilizing wave 6 data and lavaan version 0.5-23 (Rosseel, 2011) in R version 3.6.1. The goodness-of-fit indices for the three-factor PAL2 Emerging Adult Sociocognitive Vocational Development CFA were as follows: chi-square statistic, $\chi^2(3) = 547.93$, $p < .001$, CFI = 0.91, TLI = 0.90, RMSEA = .08, 90% CI [.07, .09], which suggests a good model fit with the data (Hoyle, 1995). Standardized factor loadings calculated and accounted for by each item for the two factors included in this study are provided in Table 6. Appendix B includes the standardized factor loadings calculated and accounted for by each item within all three factors.

Table 6

Summary of Preliminary Study Confirmatory Factor Analysis Results for the Two Factors Included from the PAL2 Emerging Adult Vocational Development (adapted from McCarthy et al., 2015)

Factor and Item	Standardized factor loading
Factor 1: Career Navigation (7 items)	
18. Confident in your ability to set and achieve long-term goals for yourself?	0.83
17. Confident in your ability to set and achieve short-term goals for yourself?	0.79
14. You have a good sense of your future job or career path?	0.77
16. Able to make career decisions?	0.76
13. Confident that in the future you could find a satisfying job or career path?	0.76
19. Able to find resources and people to help you achieve your job/career goals?	0.72
15. Able to find information about jobs or careers that you're interested in?	0.70
Factor 2: Future Orientation (7 items)	
5. I feel confident that I will achieve my goals.	0.84
6. I think my future will be positive	0.79
10. In the next five years, I feel confident that I will be happy	0.70
3. I can imagine myself being an important adult in my community	0.67
8. How do you think your own life will go in the next five years? Do you think it will get better or worse?	0.60
2. I can imagine what my life will be like when I'm grown up	0.57

Table 6, continued

Factor and Item	Standardized factor loading
7. Looking ahead to the next five years, do you think that things in the rest of the world will get better or worse?	0.28
Cumulative Cronbach's Alpha: .89	

Note. Item ranges: 0-4, 0-3, 1-5, 1-10.

Main Study Analyses

To answer research questions 1 and 2, I first estimated a Random Intercept Cross Lagged Panel Model (RI-CLPM) using Structural Equation Modeling (SEM). In contrast to a traditional CLPM (see Appendix C for tests comparing the CLPM and RI-CLPM), the RI-CLPM is advantageous because it allows you to isolate each score – a within-person part (i.e., cross-lagged paths) and a between-person part (i.e., random intercepts). The RI-CLPM assesses stability across time with the use of latent factors (i.e., random intercepts) to capture stable between-person differences (Dietvorst et al., 2018; Hamaker et al., 2015). Thus, in a RI-CLPM model, the random intercept represents between-person, trait-like stability. Because the random intercept isolates variance attributable to stable between-person differences, the cross-lagged paths and within-wave correlations of the RI-CLPM are thought to capture true within-person associations. I selected the best fitting RI-CLPM based on the model fit (fit statistics) using the following recommended cut off values by Kline (2016): comparative fit index (CFI) > 0.90, root mean square error of approximation (RMSEA) < 0.10, and standardized root mean square residual (SRMR) < 0.10.

The overarching goal of this study is to examine the relationship between SPD and sociocognitive vocational outcomes across three years of emerging adulthood. Figure

3 depicts visually research questions 1 and 2 through paths A_1, A_2, B_1, B_2, C_1, C_2, D_1 and D_2. I additionally assessed the correlation of the stable between-person differences between SPD and sociocognitive vocational outcomes, visually depicted through Path E. All nine paths were included in the main study analyses and addressed research questions 1 and 2.

Figure 3. Path Model of Sociopolitical Development and Sociocognitive Vocational Outcomes

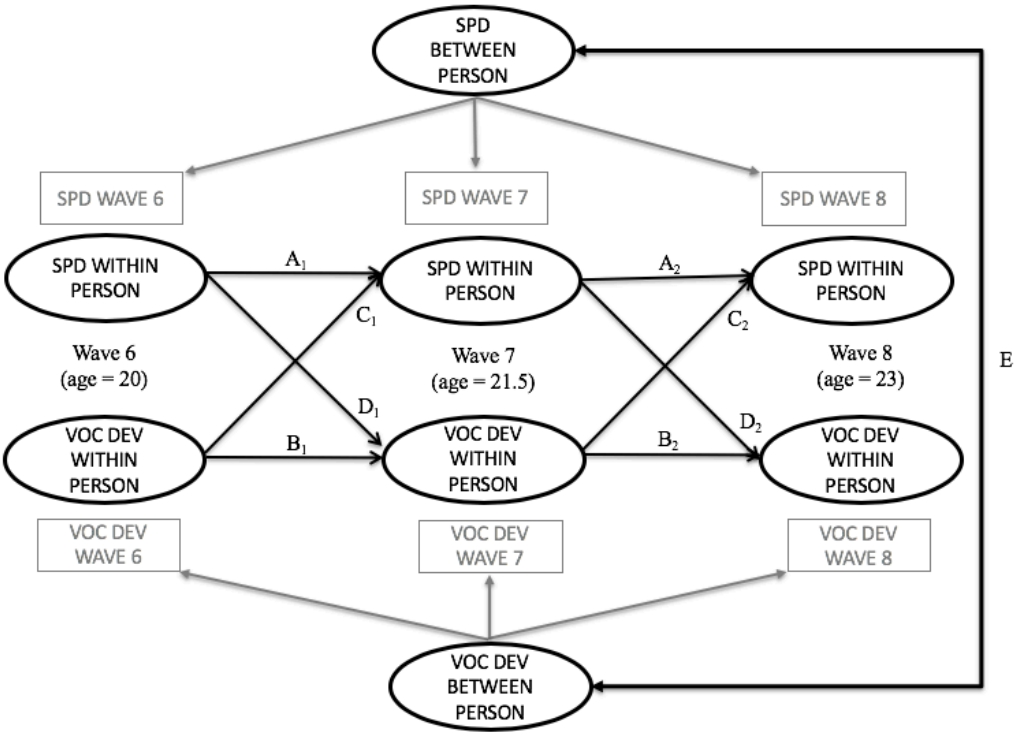


Figure 3. Path Model between Sociopolitical Development and Sociocognitive Vocational Outcomes Across Emerging Adulthood.

Research Question 1: What is the stability of SPD and sociocognitive vocational outcomes from age 20 to 23 years? Paths A_1, A_2, B_1, and B_2 depict the within-person correlations between SPD and sociocognitive vocational outcomes between each wave/time point while Path E represents between-person correlations between the

random-intercept SPD and random-intercept sociocognitive vocational outcomes. Before analyzing model paths, I first examined the degree to which effects were consistent across time by testing a series of nested models with increasing constraints (i.e., autoregressive paths, cross lagged paths). I selected a model based on fit indices to achieve the most parsimonious model. All models control for age at Wave 6 and employment status/history at Waves 7 and 8, respectively. Table 7 depicts the series of nested RI-CLPM models that link sociocognitive vocational outcomes and sociopolitical development. Results showed that the final RI-CLPM, in which all SPD and sociocognitive vocational outcome paths were freely estimated, displayed a good model fit ($\chi^2(21) = 30.90$, $p = 0.08$, CFI = 0.99, RMSEA = 0.03, 90% CI [.00, .06], SRMR = 0.04).

Next, to test the hypothesized stability of sociopolitical development and sociocognitive vocational outcomes at the individual level, I considered within-person autoregressive parameters of the RI-CLPM, the random-intercepts that represent between-person trait-like stability, and the between-person correlations between the random-intercept of SPD and the random-intercept of the sociocognitive vocational outcomes. Figure 4 depicts the stability of sociopolitical development and sociocognitive vocational outcomes across all three waves, after controlling for age, whether or not emerging adults had ever had a paying job, and whether or not emerging adults were employed in the last month.

Three analytic results support the trait-like stability of SPD for this sample of emerging adults: (1) the presence of a SPD random intercept, (2) SPD autoregressive

paths were not significant, and (3) the sample SPD mean for participants overall increased by a total of five percent between wave 6 and wave 8 (see Table 4).

Table 7

Goodness-of-Fit for Random-Intercept Cross-Lagged Panel Model at Various Levels of Constraints in Models of Sociopolitical Development and Sociocognitive Vocational Outcomes

	Model	χ^2	*df*	$\Delta\chi^2$*(df)*	*CFI*	*TLI*	*RMSEA*	*SRMR*
Sociocognitive Vocational Outcomes								
	Model 0	0.87	1	-	1.00	1.00	0.00	0.01
	Model 1	2.25	2	1.62 (1)	0.99	1.00	0.02	0.01
	Model 2	2.25	2	1.52 (1)	0.99	1.00	0.02	0.02
Sociopolitical Development								
	Model 0	0.87	1	-	1.00	1.00	0.00	0.01
	Model 1	2.38	2	1.51 (1)	0.99	1.00	0.02	0.01
	Model 2	1.61	2	0.74 (1)	1.00	1.00	0.00	0.01

Note. *df* = degrees of freedom; CFI = comparative fit index; TLI = Tucker-Lewis Index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual.
Model 0: all paths are freely estimated; Model 1: autoregressive lags additionally constrained to be equal within construct; Model 2: cross-lagged paths are constrained to be equal across each time for the construct.

The use of a random intercept within a RI-CLPM compares participants' SPD levels at each wave to their overall, unique mean levels of SPD. The random intercept represents differences in an individual's scores based off of their unique own mean and thus represents between-person or trait-like stability. In addition to this random intercept, model results indicated that autoregressive stability paths for sociopolitical development were not significant ($p > .05$) across all waves. Considered collectively, the inclusion of a SPD random intercept, and the absence of significant autoregressive paths for SPD, indicates that SPD was stable for this sample of emerging adults across ages 20 to 23.

Unlike the stability of SPD, sociocognitive vocational outcomes were stable between the ages of 20 to 21.5 (between waves 6 and 7) but became less stable between the ages of 21.5 to 23 (between waves 7 and 8). Three analytic results support the trait-like stability of sociocognitive vocational outcomes between the ages of 20 to 21.5: (1) the presence of a sociocognitive vocational outcome random intercept, (2) the sociocognitive vocational outcome autoregressive path between wave 6 and wave 7 was not significant, and (3) the sample sociocognitive vocational outcome mean for participants overall did not increase between wave 6 to wave 7 (Wave 6: $M = 1.31$, $SD = 0.66$; Wave 7: $M = 1.31$, $SD = 0.69$; Wave 8: $M = 1.32$, $SD = 0.69$). As previously indicated, the use of a random intercept compares participants' sociocognitive vocational outcome levels at each wave to their overall, unique mean levels of sociocognitive vocational outcomes. The random intercept represents differences in an individual's scores based off of their unique own mean, and thus represents between-person or trait-like stability. Model results additionally indicate that sociocognitive vocational outcomes were not significant across Wave 6 to Wave 7 ($p > .05$) but were significant across Wave 7 to Wave 8 ($p = .01$), suggesting that the stability of sociocognitive vocational outcomes decreases for emerging adults between the ages of 21.5 to 23. Interpretation of the significant and positive autoregressive sociocognitive vocational outcome path between Wave 7 and Wave 8 ($b = .31$, $p = .01$, 95% CI [0.08, 0.54]) indicates that participants' sociocognitive vocational outcome levels at both wave 7 and wave 8 were above their expected scores. Participants' expected scores are based on participants' unique mean levels of sociocognitive vocational outcomes. Considered collectively, the inclusion of a sociocognitive vocational outcome random intercept, and the absence of a significant

autoregressive path for sociocognitive vocational outcome between waves 6 and 7 indicates that this construct was stable for this sample of emerging adults between the ages of 20 to 21.5. The presence of a significant autoregressive path for sociocognitive vocational outcomes between waves 7 and 8 indicates that this construct becomes less stable for this sample of emerging adults between the ages of 21.5 to 23.

Overall, study results indicate that for this sample of emerging adults (a) SPD remained stable between waves 6, 7, and 8, and (b) sociocognitive vocational outcomes are stable between wave 6 and wave 7 but participants demonstrated some instability between wave 7 and 8. One additional path model to consider is the between-person correlation between the random-intercept of SPD and the random-intercept of sociocognitive vocational outcomes (Path *E* in Figure 3). This between-person correlation was significant ($b = .10$, $p < .001$, 95% CI [0.05, 0.13]); this positive and significant association indicates that participants who reported higher SPD also reported greater sociocognitive vocational outcomes; conversely, participants who reported lower SPD also reported poorer sociocognitive vocational outcomes.

These results indicate that study hypotheses were supported as SPD is stable between the ages of 20 to 23 for our emerging adult sample. Additionally, study results partially support study hypotheses as sociocognitive vocational outcomes were stable between the ages of 20 to 21.5 but became less stable between the ages of 21.5 to 23.

Research Question 2: What is the causal relationship between sociopolitical development and sociocognitive vocational variables between ages 20 and 23. Paths C_1, C_2, D_1 and D_2 of Figure 3 depict the relationship tested. The final RI-CLPM model also included a bivariate autoregressive cross-lagged path model to test the predictive

relational nature of SPD and sociocognitive vocational outcomes throughout emerging adulthood (e.g., Paths C_1, C_2, D_1 and D_2; see Figure 3). To test the hypothesized transactional processes between SPD and sociocognitive vocational outcomes, cross lagged paths of the RI-CLPM were analyzed. Results show that the final RI-CLPM, also presented under Research Question 1, displayed good model fit ($\chi^2(21) = 30.90$, $p = 0.08$, CFI = 0.99, RMSEA = 0.03, 90% CI [.00, .06], SRMR = 0.04). Figure 4 depicts the transactional relationship between sociopolitical development and sociocognitive vocational outcomes across all three waves. After controlling for age, whether or not emerging adults had ever had a paying job, and whether or not emerging adults were employed in the last month, cross-lagged paths for both sociopolitical development and sociocognitive vocational outcomes were not significant ($p > .05$). Overall, these results indicate that study hypotheses were not supported and sociocognitive vocational outcomes do not predict SPD and SPD does not predict emerging adult sociocognitive vocational outcomes over time.

Research Question 3: Is the strength of the relationship between SPD and sociocognitive vocational outcomes moderated by racial/ethnic identity, sex, and postsecondary education at each time point?

Moderation by Race/Ethnicity. To test whether race/ethnicity moderates the relationship between SPD and sociocognitive vocational outcomes, multigroup analyses were conducted. Multigroup analyses examine group differences in all parameters of the path model.

Figure 4. Emerging Adult SPD and Vocational Outcome Stability and Cross-Lagged Paths

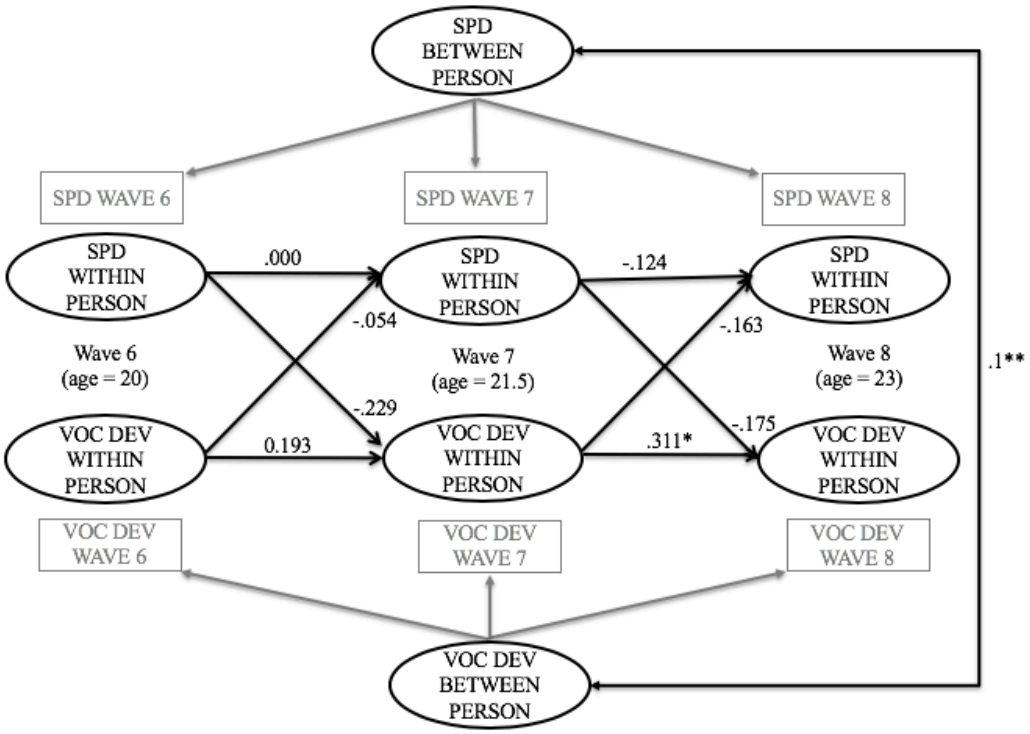


Figure 4. Simplified representation of the RICLPM showing autoregressive and cross-lagged paths of the reciprocal relationship between sociocognitive vocational outcomes and sociopolitical development. Values refer to standardized estimates. *$p < .05$; **$p < .01$.

In order to most effectively understand how the relationship between SPD and sociocognitive vocational outcomes differed between racial/ethnic groups, I considered between group differences using five multigroup models: (Model 1) white versus Asian/Asian American-Pacific Islander (API) participants, (Model 2) white versus multiracial participants, (Model 3) white versus African American/Black (AAB) participants, (Model 4) white versus Latinx participants, and (Model 5) white versus nonwhite participants. First, the two multigroup models comparing white versus API and

white versus AAB did not converge. Thus, I could not make any conclusions about whether moderation was significant for these two ethnic groups (API and AAB). Second, the baseline model, which constrained paths between white versus multiracial participants to be equal, was not significantly different ($\chi^2(40) = 51.92$, $p = .10$) from the model that allowed parameters to vary by racial/ethnic group. Thus, race/ethnicity did not significantly moderate the model comparing white and multiracial participants. Figure 5 depicts the model results when comparing white and multiracial participants.

Results from the fourth multigroup model indicated that race/ethnicity was a significant moderator in the model comparing white versus Latinx participants. Figure 6 depicts the model results when comparing white and Latinx participants. The model displayed good fit ($\chi^2(40) = 86.28$, $p < 0.001$, CFI = 0.94, RMSEA = 0.08, 90% CI [.06, .10], SRMR = 0.06). For white participants but not Latinx participants, the between person correlation between sociocognitive vocational outcomes and SPD was significant and positive ($b = .08$, $p < .01$, 95% CI [0.02, 0.13]). Although this correlation is small, it suggests that white participants who had higher of SPD also had higher sociocognitive vocational outcomes. For white participants but not Latinx participants, I found that having held a paying job in the last one month was significantly related to sociocognitive vocational outcomes at wave 8 ($b = .21$, $p < .05$, 95% CI [0.02, 0.40]). That is, holding a job within the last month at wave 7 predicted higher sociocognitive vocational outcomes at wave 8 for white participants. Additionally, for white participants but not Latinx participants, I found that having ever held a paying job was significantly related to SPD at wave 7 ($b = .19$, $p < .01$, 95% CI [0.07, 0.31]); that is, if white participants had ever held a paying job by wave 6, then this experience predicted greater SPD at wave 7. For

white participants but not Latinx participants, we found that sociocognitive vocational outcomes at wave 7 predicted sociocognitive vocational outcomes at wave 8 (b = .41, p < .05, 95% CI [0.10, 0.72]). This suggests that white participants are scoring higher than expected at waves 7 and 8 given their average sociocognitive vocational outcomes across all three waves (i.e., accounting for the latent random-intercept of sociocognitive vocational outcomes). For Latinx participants but not white participants, we found that sociocognitive vocational outcomes at wave 6 predicted sociocognitive vocational outcomes at wave 7 (b = .52, p < .05, 95% CI [0.07, 0.98]); that is, Latinx participants are scoring higher than expected at waves 6 and 7 given their average sociocognitive vocational outcomes across all three waves (i.e., comparing an individual's scores to their unique sociocognitive vocational outcome mean the three waves).

Results from the fifth multigroup model indicated that race/ethnicity was a significant moderator in the model comparing white versus nonwhite participants. Figure 7 depicts the model results when comparing white and nonwhite participants. The model displayed good fit ($\chi^2(40) = 65.28$, p = 0.007, CFI = 0.97, RMSEA = 0.05, 90% CI [.03, .07], SRMR = 0.06). For both white and non-white participants, the between person correlation between sociocognitive vocational outcomes and SPD was significant and positive (white participants: b = .076, p < .01, 95% CI [0.03, 0.13], non-white participants: b = .10, p < .001, 95% CI [0.05, 0.15]). Although these correlations are small, it suggests that all emerging adults, regardless of race or ethnicity, who reported greater levels of SPD also experienced higher levels of sociocognitive vocational outcomes. For white participants but not ethnic/racial minority participants, we found that having held a paying job in the last one month was significantly related to sociocognitive

vocational outcomes at wave 8 (b = .224, p < .05, 95% CI [0.03, 0.42]). This implies that holding a job within the last month at wave 7 predicted better sociocognitive vocational outcomes at wave 8 for white participants. Additionally, for white participants, but not all other non-white participants, I found that having ever held a paying job was significantly related to sociopolitical development at wave 7 (b = .19, p < .01, 95% CI [0.07, 0.31]). This suggests that having a paying job promotes greater levels of SPD for white emerging adults. Further, for white participants but not all other non-white participants, we found that wave 7 sociocognitive vocational outcomes predicted sociocognitive vocational outcomes at wave 8 (b = .39, p < .05, 95% CI [0.08, 0.70]). This suggests that when compared to all other ethnic/racial minorities, white participants are scoring higher than expected at waves 7 and 8 given their average sociocognitive vocational outcomes across all three waves (i.e., accounting for the latent random-intercept of sociocognitive vocational outcomes). Lastly, for ethnic/racial minorities, but not white participants, I found that age predicted SPD at wave 8 (b = -.01, p < .01, 95% CI [-0.18, -0.00]). Although these correlations are small, it suggests that younger emerging adults of color reported higher levels of SPD.

Post-Hoc Analysis on Race/Ethnicity.

Correlations by Race/Ethnicity. I additionally compared correlations for all study variables between white versus nonwhite participants. Correlation comparisons by white versus nonwhite participants are displayed in Table 8.

Figure 5. Path Model Moderated by Race/Ethnicity (White vs. Multiracial)

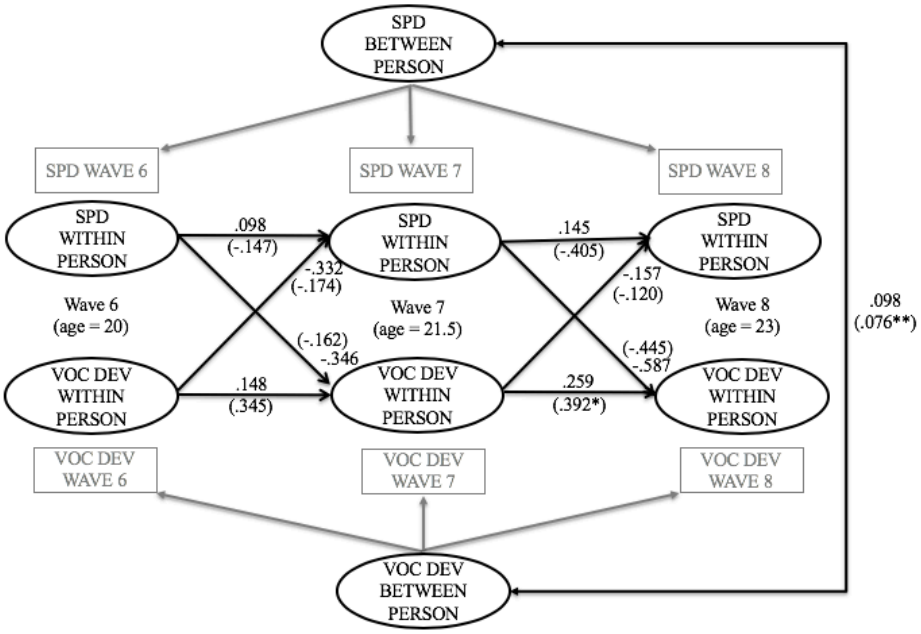


Figure 5. Simplified representation of the RI-CLPM showing moderation paths by white versus multiracial participants with sociocognitive vocational outcomes and SPD. Values refer to standardized estimates. Values for white participants are listed within the parentheses. *$p < .05$, **$p < .001$.

Figure 6. Path Model Moderated by Race/Ethnicity (White vs. Latinx)

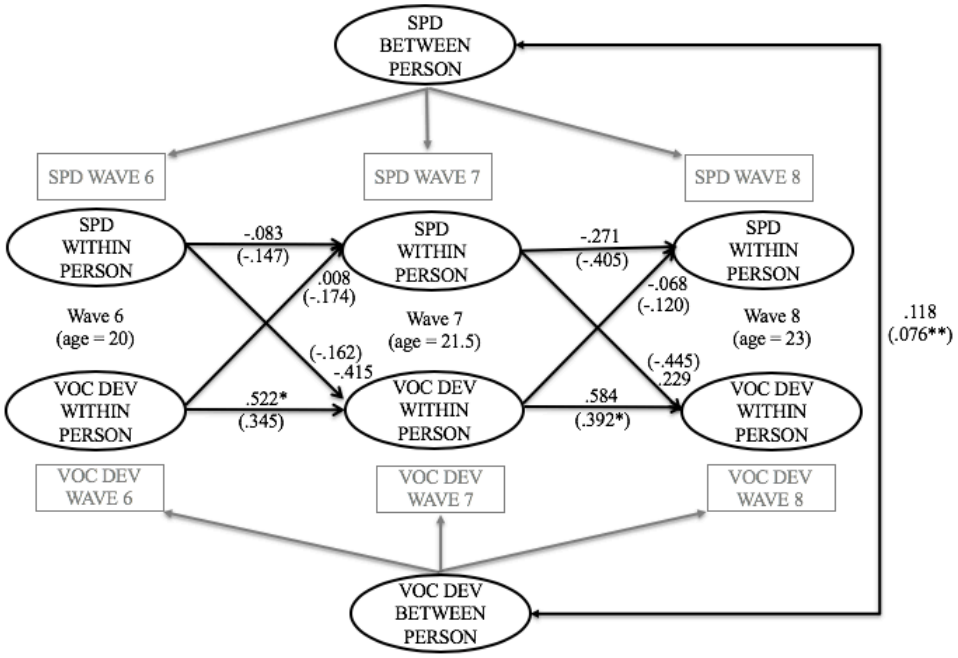


Figure 6. Simplified representation of the RI-CLPM showing moderation paths by white versus Latinx participants with sociocognitive vocational outcomes and SPD. Values refer to standardized estimates. Values for white participants are listed within the parentheses. *$p < .05$, **$p < .01$.

Figure 7. Path Model Moderated by Race/Ethnicity (White vs. Non-White)

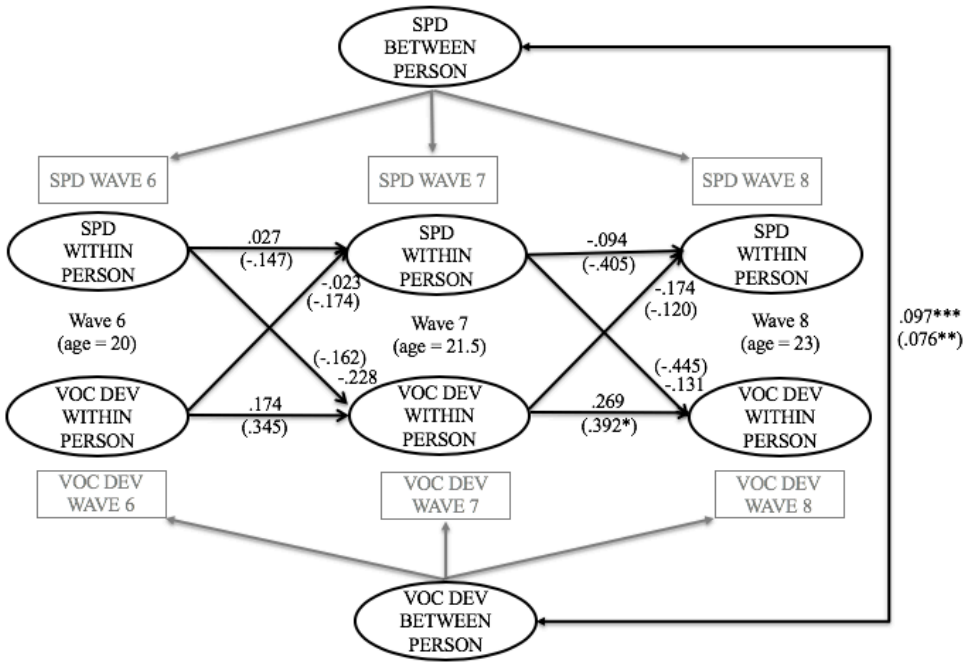


Figure 7. Simplified representation of the RI-CLPM showing moderation paths by white versus non-white participants with sociocognitive vocational outcomes and SPD. Values refer to standardized estimates. Values for white participants are listed within the parentheses. *$p < .05$, **$p < .01$, ***$p < .001$.

Group Differences by Race/Ethnicity. I additionally compared the means and standard deviations of primary outcome variables by ethnic groups (group differences). Mean comparisons across ethnic groups are displayed in Table 9. I conducted analyses of variance (ANOVA) to identify whether there were mean differences across ethnic identity groups on any of the primary variables.

Table 8

Correlations by Racial/Ethnic Identity for all Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	11
1. W6 SPD	_	.51**	.52**	.31**	.19**	.20**	.11	.07	.03	-.01	.12
2. W7 SPD	.69**	_	.49**	.26**	.25**	.20**	.12	.13	.05	-.01	.13
3. W8 SPD	.64**	.67**	_	.26**	.17*	.27**	.11	.22**	-.16*	-.04	.12
4. W6 Voc Comp	.22*	.24**	.28**	_	.61**	.53**	.03	-.01	-.04	.06	-.01
5. W7 Voc Comp	.19*	.26**	.16	.64**	_	.66**	-.02	.03	-.07	.04	.04
6. W8 Voc Comp	.15	.20*	.29*	.57**	.71**	_	-.06	.14*	.05	.18**	.11
7. Sex	.22**	.23*	.20*	.05	.09	.01	_	-.09	-.09	-.05	.02
8. PSE	.26**	.29**	.31**	.29**	.10	.18*	.27**	_	-.09	-.01	-.06
9. W6 Age	.04	-.05	-.15	-.04	-.09	-.18*	.00	-.33**	_	.10	.09
10. Held Job	.11	.16	.03	.20*	.18*	.15	.21*	-.01	.09	_	.19**
11. Employed	.00	.04	.07	.02	.00	.07	.18*	.22*	-.18*	.14	_

Note. Correlations are split by ethnic identity where white participant correlations listed below the diagonal and non-white participant correlations are listed above the diagonal of the table. ** $p < .01$, * $p < .05$. W6, W7, W8 refer to waves 6, 7, and 8 respectively; SPD = Sociopolitical Development, Voc Comp = Sociocognitive Vocational Outcome Composite, PSE = Postsecondary education, Held Job = "Have you ever held a paying job?", Employed = "In the last

month, were you employed?" Measure ranges of outcome variables are as follows: SPD: [1, 4], Voc Outcomes: [-1.31, 2.55]. Moderator and covariate variables: PSE (0 = No PSE, and 1 = PSE), sex (1 = Male, and 8 = Female), whether the participant had ever held a paying job (0 = No, and 1 = Yes), and whether the participant was employed in the last month (0 = No, and 1 = Yes) were dichotomous variables.

Results indicated a significant difference between ethnic groups at Wave 7 for sociocognitive vocational outcomes, $F(6, 376) = 2.36$, $p = .03$ and at Wave 8 for sociocognitive vocational outcomes, $F(6, 350) = 4.14$, $p = < .001$. Due to statistically significant mean differences, I conducted a Tukey post hoc analyses. Post hoc comparisons using the Tukey HSD test indicated that the mean score of Wave 7 sociocognitive vocational outcomes for multiracial participants ($M = 1.19$, SD = .80, 95% CI [1.01, 1.37]) was significantly lower than that for African American/Black participants ($M = 1.59$, SD = .56, 95% CI [1.45, 1.73]), $p = .012$, 95% CI [.05, .76]. Additionally, the mean score of Wave 8 sociocognitive vocational outcomes for African American/Black participants ($M = 1.65$, SD = .67, 95% CI [1.48, 1.83]) was significantly higher than that for European American participants ($M = 1.24$, SD = .62, 95% CI [1.31, 1.35]), $p = .003$, 95% CI [09, .73]. Hispanic/Latinx participants ($M = 1.22$, SD = .62, 95% CI [1.05, 1.39]), $p = .014$, 95% CI [.05, .82]., and Multiracial participants ($M = 1.24$, SD = .84, 95% CI [1.04, 1.44]), $p = .012$, 95% CI [.05, .78]. There were no significant differences between ethnic groups for SPD across the three waves.

Moderation by Sex. To test whether sex moderates the relationship between SPD and sociocognitive vocational outcomes, multigroup analyses were conducted. This analyses examines differences for males versus female participants in all parameters of the path model.

Table 9

Means and Standard Deviations of SPD and Sociocognitive Vocational Outcomes across Racial/Ethnic Groups

Racial/ Ethnic Group	W6 SPD		W7 SPD		W8 SPD		W6 Voc Comp		W7 Voc Comp		W8 Voc Comp	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
European American	3.08	.51	3.13	.48	3.15	.55	1.33	.60	1.30	.67	1.24[a]	.62
American Indian/ Native American	2.72	.83	2.80	.86	3.32	.44	1.12	.96	1.34	.88	1.59	.68
African American/ Black	3.06	.49	3.13	.52	3.22	.56	1.50	.62	1.59[a]	.56	1.65[a,b,c]	.67
Hispanic/ Latinx	2.96	.60	3.04	.53	3.11	.57	1.21	.72	1.28	.71	1.22[b]	.62
Asian American	2.85	.47	2.97	.55	3.04	.53	1.15	.54	1.18	.47	1.24	.48
Pacific Islander	2.94	.51	2.90	.64	3.17	.53	1.50	.83	1.33	.41	1.90	.51
Multiracial	3.04	.56	3.11	.48	3.27	.54	1.28	.68	1.89[a]	.80	1.24[c]	.84

Note. W6, W7, W8 refer to waves 6, 7, and 8 respectively; SPD = Sociopolitical Development, Voc Comp = Sociocognitive Vocational Outcome Composite. Group means differ in rows with the same subscripts.

Figure 8 depicts the model results when comparing female and male participants. The model displayed good fit ($\chi^2(40) = 69.95$, $p = 0.002$, CFI = 0.96, RMSEA = 0.06, 90% CI [.04, .08], SRMR = 0.06). Thus, results from this multigroup model indicated that sex was a significant moderator in the model comparing male and female participants. For both female and male participants, the between person correlation between sociocognitive vocational outcomes and SPD was significant and positive (female participants: $b = .085$, $p < .01$, 95% CI [0.03, 0.14], male participants: $b = .081$, $p < .001$, 95% CI [0.04, 0.12]). Although these correlations are small, it suggests that all emerging adults, regardless of sex, who reported greater levels of SPD also experienced higher levels of sociocognitive vocational outcomes. Additionally, for female participants but not male participants, we found that age predicted SPD at wave 8 ($b = -.01$, $p < .01$, 95% CI [-0.02, -.00]). Although these correlations are small, it suggests that younger female emerging adults reported higher levels of SPD. Lastly, for female participants but not male participants, we found that sociocognitive vocational outcomes at wave 7 predicted sociocognitive vocational outcomes at wave 8 ($b = .36$, $p < .05$, 95% CI [0.06, 0.66]). This suggests that female participants are scoring higher than expected at both wave 7 and wave 8 given their average sociocognitive vocational outcomes across all three waves (i.e., accounting for the latent random-intercept of sociocognitive vocational outcomes).

Figure 8. Path Model Moderated by Sex

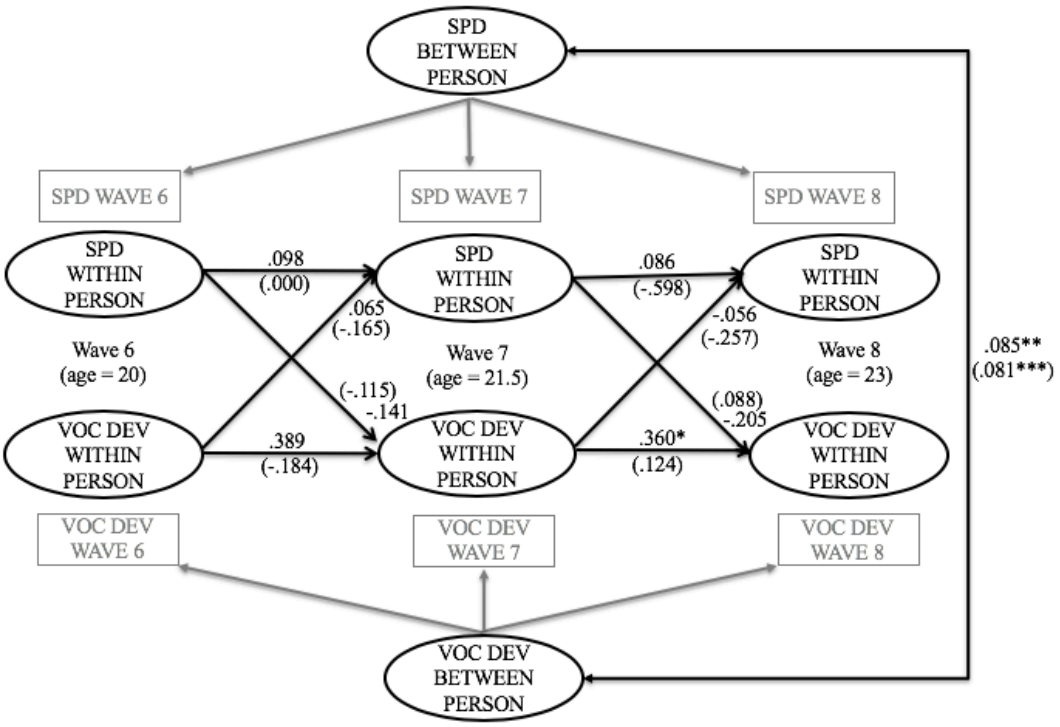


Figure 8. Simplified representation of the RI-CLPM showing moderation paths by sex with sociocognitive vocational outcomes and SPD. Values refer to standardized estimates. Values for male participants are listed within the parenthesis. *$p < .05$, **$p < .01$, ***$p < .001$.

Post-hoc Analysis on Sex.

Correlations by Sex. I also compared correlations between male and female participants. Correlation comparisons by female versus male participants are displayed in Table 10. For both groups, all waves of SPD and sociocognitive vocational outcomes were correlated. For both females and males, whether a participant had ever held a job was correlated with wave 7 and 8 sociocognitive vocational outcomes; however, whether men only had ever held a job was correlated with wave 6 sociocognitive vocational outcomes.

Table 10

Correlations by Sex for all Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	11
1. W6	_	.53**	.49**.	.26**	.24**	.20**	-.03	.21**	-.09	.12	.03
2. W7	.59**	_	.48**	.31**	.27**	.16*	.06	.20*	-.04	.08	.05
3. W8	.63**	.61**	_	.23**	.18*	.25**	-.21**	.31**	-.01	-.03	.08
4. W6 Voc Comp	.31**	.17*	.32**	_	.66**	.54**	-.04	.12	-.10	.03	-.02
5. W7 Voc Comp	.12	.24**	.18*	.57**	_	.70**	-.13	.08	-.01	.17*	.08
6. W8 Voc Comp	.16*	.27**	.29**	.55**	.66**	_	-.03	.12	.06	.20*	.15
7. W6 Age	.08	-.02	-.07	-.04	-.13	-.03	_	-.13	.23**	.06	.01
8. PSE	.09	.18*	.18*	.06	.08	.12	-.13	_	.13	-.11	-.01
9. EI	.03	.03	.12	.03	-.01	.06	.23**	.13	_	.09	-.08
10. Held Job	-.06	-.01	-.02	.18*	.17*	.20*	.06	-.12	.09	_	.18*
11. Employed	.12	.14	.11	.03	.08	.15	.01	-.01	-.08	.18*	_

Note. Correlations are split by sex: male correlations are listed below the diagonal and female correlations are listed above the diagonal. ** $p < .01$, * $p < .05$. W6, W7, W8 refer to waves 6, 7, and 8 respectively; SPD = Sociopolitical Development, Voc Comp = Sociocognitive Vocational Outcome Composite, PSE = Postsecondary education, Held Job = "Have you ever held a paying job?", Employed = "In the last month, were you employed?" Measure ranges of

outcome variables are as follows: SPD: [1, 4], Voc Outcomes: [-1.31, 2.55]. Moderator and covariate variables: PSE (0 = No PSE, and 1 = PSE), sex (1 = Male, and 8 = Female), whether the participant had ever held a paying job (0 = No, and 1 = Yes), and whether the participant was employed in the last month (0 = No, and 1 = Yes) were dichotomous variables.

Moderation by Postsecondary Education. To test whether postsecondary education moderates the relationship between SPD and sociocognitive vocational outcomes, multigroup analyses were conducted. This considered the baseline model, which constrained paths between participants who pursued postsecondary educations and those who did not to be equal, with the model that allowed parameters to vary by postsecondary educations. Figure 9 depicts the model results when comparing participants with and without PSE. The chi-squared test for postsecondary education was not significant: $\chi^2(40) = 54.240$, $p = .066$, Thus, postsecondary education did not significantly moderate the model comparing participants with and without postsecondary education. However, one significant path for participants both with and without PSE is the between person correlation between sociocognitive vocational outcomes and SPD (no-PSE participants: $b = .126$, $p < .01$, 95% CI [0.03, 0.22], PSE participants: $b = .055$, $p < .01$, 95% CI [0.02, 0.09]). Although these correlations are small, it suggests that all emerging adults, regardless of their pursuit of postsecondary education, who reported greater levels of SPD also experienced higher levels of sociocognitive vocational outcomes.

Post-hoc Analysis on Postsecondary Education.

Correlations by Postsecondary Education. I also compared correlations between participants with postsecondary educations and participants without postsecondary education.

Figure 9. Path Model Moderated by Postsecondary Education

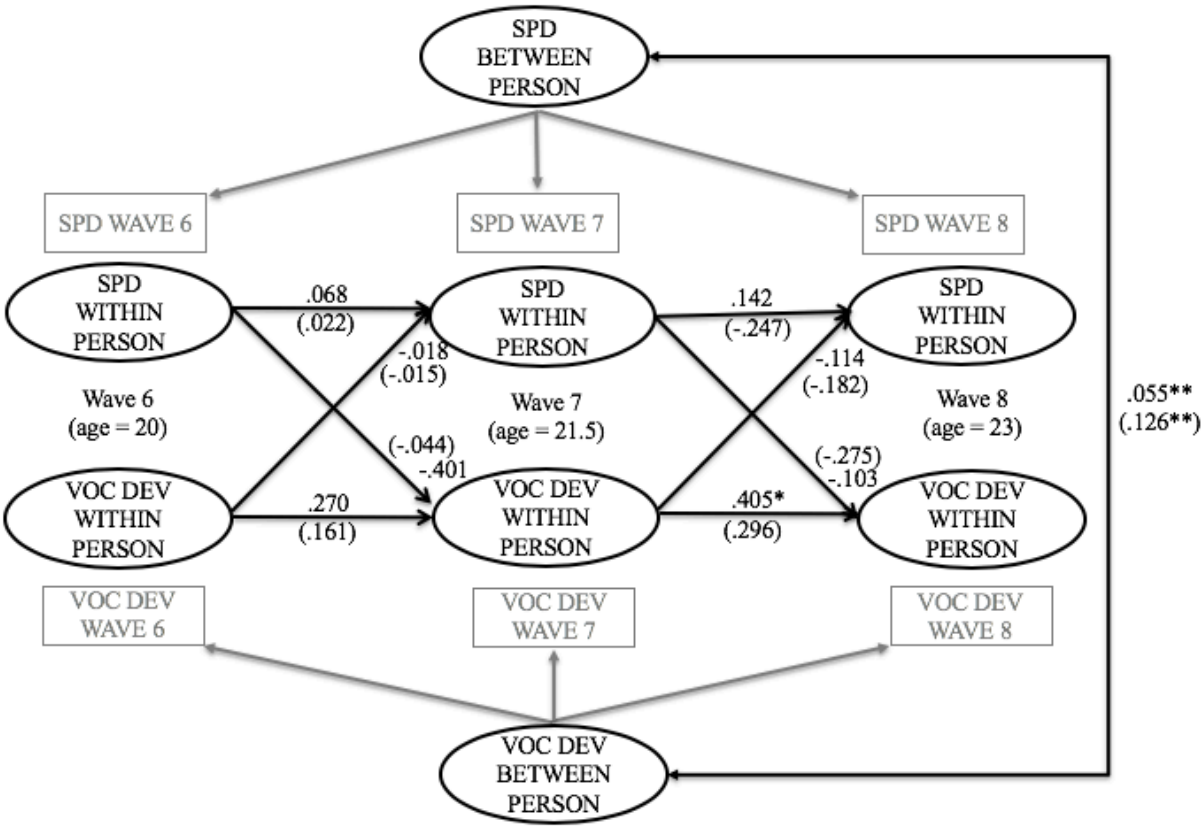


Figure 9. Simplified representation of the RI-CLPM showing moderation paths by postsecondary education with sociocognitive vocational outcomes and SPD. Values refer to standardized estimates. Values for participants with PSE are listed within the parentheses. $^{**}p < .01$.

Correlation comparisons by no PSE versus PSE participants are displayed in Table 11. For both groups, all waves of SPD were moderately correlated as well as all waves of sociocognitive vocational outcomes. Additionally, for participants with no PSE, whether a participant had ever held a paying job was associated with sociocognitive vocational outcomes at Wave 7 and Wave 8.

Table 11

Correlations by Postsecondary Education for all Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	11
1. W6 SPD	_	.60**	.63**.	.27**	.16*	.11	.17*	-.11	-.06	.05	.12
2. W7 SPD	.49**	_	.56**	.20**	.18*	.10	.16*	-.03	-.00	.08	.05
3. W8 SPD	.43**	.48**	_	.22**	.11	.16*	.21**	.05	-.19**	.06	.05
4. W6 Voc Comp	.22*	.31**	.31**	_	.61**	.53**	.05	-.14*	-.02	.04	.01
5. W7 Voc Comp	.14	.28**	.23*	.62**	_	.67**	-.02	-.07	-.02	.06	.00
6. W8 Voc Comp	.24*	.26**	.30*	.54**	.69**	_	-.02	-.01	.05	.09	.05
7. Sex	.06	.11	.03	-.02	.02	-.06	_	-.05	-.07	.15*	.09
8. EI	.16	.01	.08	.11	-.10	-.01	.25**	_	.10	.00	-.13
9. W6 Age	.13	.08	.-.00	-.05	-.06	-.03	.03	-.06	_	.02	-.00
10. Held Job	.03	.01	-.13	.12	.19*	.29**	-.08	-.11	.12	_	.16*
11. Employed	.10	.22*	.16	-.05	.04	.12	-.02	.06	.04	.25**	_

Note. Correlations are split by PSE: no-PSE correlations are listed below the diagonal and PSE correlations are listed above the diagonal. ** $p < .01$, * $p < .05$. W6, W7, W8 refer to waves 6, 7, and 8 respectively; SPD = Sociopolitical Development, Voc Comp = Sociocognitive Vocational Outcome Composite, PSE = Postsecondary education, Held Job = "Have you ever held a paying job?", Employed = "In the last month, were you employed?" Measure ranges of

outcome variables are as follows: SPD: [1, 4], Voc Outcomes: [-1.31, 2.55]. Moderator and covariate variables: PSE (0 = No PSE, and 1 = PSE), sex (1 = Male, and 8 = Female), whether the participant had ever held a paying job (0 = No, and 1 = Yes), and whether the participant was employed in the last month (0 = No, and 1 = Yes) were dichotomous variables.

V: DISCUSSION

This purpose of this dissertation study was to (a) examine the stability of emerging adults' sociopolitical development (SPD) and sociocognitive vocational outcomes between the ages of 20 to 23; (b) examine if there is a predictive relationship between emerging adults' SPD and sociocognitive vocational outcomes across time; and (c) determine if racial/ethnic identity, sex, or postsecondary education (PSE) moderate the relationship between SPD and sociocognitive vocational outcomes. As hypothesized, study results showed that in general, emerging adults' SPD was stable across all three waves. However, emerging adults' sociocognitive vocational outcomes demonstrated stability between waves 6 and 7 (between the ages of 20 to 21.5) but demonstrated some instability between waves 7 and 8 (between the ages of 21.5 to 23). Contrary to study hypotheses, SPD and sociocognitive vocational outcomes did not predict one another across time. With respect to the moderating effects of race/ethnicity, sex, or PSE, I did not explicitly hypothesize a directional effect. Findings indicated that the stability of emerging adults' SPD was not moderated by race/ethnicity, sex, or PSE. The stability of sociocognitive vocational outcomes was moderated by race/ethnicity and sex, but not PSE. Race/ethnicity moderated the longitudinal stability of sociocognitive vocational outcomes when the model compared the data of white and Latinx emerging adults as well as white and non-white emerging adults. Additionally, sex moderated the longitudinal stability of sociocognitive vocational outcomes when the model compared the data of male and female emerging adults. Findings indicated that neither race/ethnicity, sex, nor PSE moderated the relationship between SPD and sociocognitive vocational outcomes.

This is the first study to examine the longitudinal relationship between SPD and sociocognitive vocational outcomes with a diverse sample of emerging adults. To date, only one published study has examined longitudinally the SPD and vocational development, and that was for adolescents (Diemer et al., 2010). Present dissertation study findings, therefore, are discussed in comparison to what is known about adolescent vocational and sociopolitical development, what is known about emerging adult development more broadly, and in consideration of study limitations. This chapter concludes with a discussion of implications for future research and practice.

Stability of Sociopolitical Development

Results from the model of the current study suggest that participants' SPD levels are uniquely consistent across the three waves (between ages 20 to 23) and thus, represent between-person or trait-like stability. Corroborating this, all emerging adults consistently endorsed moderate to high levels of sociopolitical development across all three waves (wave 6: M = 3.02, SD = .55; wave 7: M = 3.09, SD = .52; wave 8: M = 3.18, SD = .55). These findings are similar to Diemer and colleagues' (2010) results that show adolescent SPD was stable across a three-year period.

Moderation analyses comparing the data for multiracial, non-white, and Latinx emerging adults against the data for white emerging adults indicated that race/ethnicity did not moderate the stability of SPD. Additionally, post-hoc analyses indicated no significant differences in the mean levels of SPD between racial/ethnic groups. For example, SPD levels for white participants (W6: M = 3.08, SD = .51; W7: M = 3.13, SD = .48; W8: M = 3.15, SD = .55) were similar to those for African American participants (W6: M = 3.06, SD = .49; W7: M = 3.13, SD = .52; W8: M = 3.22, SD = .56) and

multiracial participants (W6: *M* = 3.04, *SD* = .56; W7: *M* = 3.11, *SD* = .48; W8: *M* = 3.27, *SD* = .54). Emerging adult Latinx participants endorsed slightly lower SPD levels across all three waves: *M* = 2.96, *SD* = .60; *M* = 3.04, *SD* = .53; *M* = 3.11, *SD* = .57 for waves 6, 7, and 8 respectively. As a point of comparison, using the same SPD scale [1, 4], McWhirter and McWhirter (2016) found slightly higher SPD levels for a sample of Latinx adolescents (*M* = 3.30, *SD* = 0.49).

Moderation results further indicated no significant differences in the longitudinal stability of SPD when comparing females and males, with both male and female emerging adults endorsing moderate to high levels of SPD. SPD levels for female participants (W6: *M* = 3.09, *SD* = .51; W7: *M* = 3.16, *SD* = .55; W8: *M* = 3.25, *SD* = .57) were similar to those for male participants (W6: *M* = 2.94, *SD* = .58; W7: *M* = 3.01, *SD* = .49; W8: *M* = 3.09, *SD* = .52). These results with this emerging adult sample are congruent with findings from McWhirter and McWhirter (2016) study who did not find significant differences between sex in Latinx adolescents' SPD levels.

Lastly, model moderation results indicated no significant differences in the longitudinal stability of SPD when comparing emerging adults with and without PSE, all endorsing similarly moderate to high levels of SPD. SPD levels of emerging adults without PSE (W6: *M* = 2.93, *SD* = .54; W7: *M* = 2.95, *SD* = .55; W8: *M* = 2.99, *SD* = .58) were similar to those for participants with PSE (W6: *M* = 3.09, *SD* = .54; W7: *M* = 3.15, *SD* = .50; W8: *M* = 3.28, *SD* = .51).

These study findings are important because they confirm the study hypothesis that emerging adults' SPD remain stable, even though emerging adulthood is defined by numerous developmental transitions that make this developmental period particularly

unstable, unpredictable, and volatile (Arnett, 2010; Beyers & Seiffge-Krenke, 2010; Cohen et al., 2003; Molgat, 2007; Wood et al., 2018). While the stability of some developmental domains has been examined in emerging adult literature (e.g., vocational development), the stability of SPD has not been examined prior to this current study. In a study with a racially/ethnically diverse sample of adolescents, Diemer and his colleagues (2010) found that SPD is stable for adolescents. Specifically, results indicated that African American, Latinx, and Asian American adolescents' SPD was stable between 10th to 12th grade (Diemer et al., 2010). Current study findings are consistent with these results and indicate that emerging adults exhibited trait-like stability for levels of SPD between the ages of 20 to 23. It is likely that the stability adolescents of color demonstrate contribute to the trait-like stability this sample of emerging adults endorse.

These study findings are also important especially since the SPD literature almost exclusively focuses on adolescents rather than emerging adults (Christens & Peterson, 2012; Diemer, 2009; Diemer & Hsieh, 2008; Diemer et al., 2010; Luginbuhl et al., 2016; Zimmerman & Rappaport, 1988). Additionally, the vast majority of emerging adult literature has been published using college-bound emerging adult samples only (e.g., Aiken & Johnston, 1973; Alessandria & Nelson, 2005; Betz & Hackett, 1981; Betz & Schifano, 2000; Blinne & Johnston, 1998; Bonifacio et al., 2018; Carter & Constantine, 2000; Chung, 2002; Gainor & Lent, 1998; Hsieh et al., 2007; Rotberg et al., 1987; Stringer & Kerpelman, 2010; Swanson & Tokar, 1991). Furthermore, the existing emerging adult research that is typically conducted with college-bound emerging adults aged between 18 to 21 (Low et al., 2005), rather than the full developmental span between ages 18 to 25 (Arnett, 2007). The present dissertation study is one of the first of

its kind in many ways: it includes emerging adults who are not college bound, it looks at vocational and sociopolitical development from age 20 to 23 years, and it is the first to examine moderators of these outcomes over time.

Moreover, the vocational and economic diversity represented in the PAL2 data is greater than that of other study samples and therefore, may not reflect the typical transitions described in extant emerging adult literature. For example, our sample of emerging adults are approximately 20-, 21.5-, and 23-years of age at each wave, which is beyond the age of a characteristic college-bound emerging adult sample. Additionally, Arnett (2015) indicates that expressions of emerging adulthood varies across social class. The economic diversity represented in the current PAL2 data is wider than the financial privilege typically seen in college-bound emerging adults. Because the diversity represented in the current PAL data is greater than typically seen in college-bound emerging adults, this sample of emerging adults did not exhibit similar trends of instability seen across other emerging adult developmental domains. It is interesting to note that in addition to the unique and consistent levels of SPD exhibited by each participant, findings also revealed that there were no significant differences in the mean levels of SPD between racial/ethnic groups.

Post-Hoc Considerations for Sociopolitical Development

As indicated above, results found that participants, regardless of race or ethnicity, reported similarly moderate to high levels of SPD across all three waves. I did not hypothesize whether race/ethnicity, sex, or PSE would moderate the model including SPD and sociocognitive vocational outcomes because to date, no empirical research has examined such moderating effects. However, there is theoretical literature that indicates

SPD is unique to racial/ethnic minorities. Hence, I conducted post-hoc analyses to examine differences in the mean levels of SPD for race/ethnicity, a non-dichotomous moderator, only. Post-hoc analyses revealed that similarly moderate to high levels of SPD for both emerging adults of color and white-identifying emerging adults. This finding is somewhat unexpected given that literature suggests SPD is unique to racial/ethnic minorities.

Theoretical literature suggests that SPD is unique to racial/ethnic minorities (Diemer et al., 2010; Diemer & Hsieh, 2008; Hope et al., 2015; Mendoza & Boum, 2015; Watts et al., 1999; Watts et al., 2003; Zimmerman et al., 1999) because SPD requires a recognition of oppression in one's own and others' lives. Because racial/ethnic minorities hold visible marginalized identities, causing them to experience oppression via racist behaviors, attitudes, and remarks, scholars posit that racial/ethnic minorities more readily recognize oppression and are more motivated to change inequitable systems (Diemer et al., 2010; Hope et al., 2015; Watts et al., 1999). Therefore, from a theoretical perspective, it was expected that emerging adults of color endorsed moderate to high levels of SPD but unexpected that white emerging adults endorsed similar levels. Context may serve as a contributing factor to these study findings and is an important point of discussion.

From an ecological perspective, human development results from the dynamic interaction between a person and their environment (Cook et al., 2002). Among other factors, one's context serves a significant part of a person's environment. Therefore, one explanation for similar moderate to high levels of SPD across racial/ethnic groups may be their shared geographical context. All study participants were initially recruited from urban areas in the Pacific Northwest, a more racially/ethnically homogeneous urban area

when compared to other areas of the United States (Shuford, 2012). The 2016 United States Census Bureau estimate of the demographic breakdown for the population in the Pacific Northwest, where data were collected, consists of 76.4% white or Caucasian (not Hispanic or Latino), 12.8% Hispanic or Latino, 2.1% Black or African American, 1.8% American Indian and Alaska Native, 4.5% Asian, 0.4% Native Hawaiian or other Pacific Islander, and 3.8% mixed race. This suggests that many neighborhoods in the Pacific Northwest comprise of a majority of white and Caucasian individuals. The Pacific Northwest geographic backdrop impacts the sociopolitical development of emerging adults of color and white-identified emerging adults distinctly. For emerging adults of color, geographical context impacts the saliency of their racial/ethnic identity (Umaña-Taylor & Shin, 2007). With a more salient racial/ethnic identity, emerging adults of color experience greater sociopolitical development (Redding, 2001). In comparison, the liberal ideology espoused in the Pacific Northwest promotes the sociopolitical development for white-identified emerging adults.

Racial and cultural identity theories describe how individuals move from a position of devaluing their racial/ethnic identity to embracing a positive cultural self (Tolliver & Tisdell, 2002). By embracing a positive cultural self, individuals integrate their racial/ethnic identity into their worldviews and consider the dynamic interaction between themselves as cultural beings with their environment (Tolliver & Tisdell, 2002; Umaña-Taylor & Shin, 2007). Additionally, scholars suggest that with more salient racial and ethnic identity arises an acknowledgement of cultural differences as well as the privileges and benefits that come with majority groups (Helms, 1984; Tolliver & Tisdell, 2002). Thus, scholars argue that as individuals integrate their racial/ethnic identity, they

also move toward greater sociopolitical development via a multileveled understanding of oppression (Tolliver & Tisdell, 2002; Watts et al., 1999). Scholars have found that ethnic identity is stronger for adolescents when they are a distinct ethnic minority in their school contexts, but not when they are attending schools in which they are a majority (Phinney, 1992; Roberts et al., 1999; Umaña-Taylor, 2004; Umaña-Taylor & Shin, 2007). Because the Pacific Northwest consists of primarily Caucasian residents, we expected emerging adults of color, many of whom inevitably assume distinct ethnic minority membership in various spaces, to experience higher levels of sociopolitical development via more salient ethnic identities. This is consistent with our findings which indicate that emerging adult participants of color endorsed moderate to high levels of SPD, which both supports this argument and is consistent with our hypotheses.

Interestingly however, white participants also experienced moderate to high mean levels of SPD. This was unexpected given that literature indicates majority status is a barrier to ethnic identity growth – this process is even tested for Caucasian adolescents (Umaña-Taylor & Shin, 2007). Again, considering the Pacific Northwest context provides insight to the similarly moderate to high levels of SPD means endorsed across all racial/ethnic emerging adult groups. While the Pacific Northwest was founded on exclusionary criteria (e.g., the Oregon Black Exclusion Law of June 1844; McClintock, 1995), there are some historians that argue that the Pacific Northwest was founded on "radical" ideas (Johnston, 2006). Exclusionary laws prohibited African American or Black people from entering the Pacific Northwest territory and the original state Constitution included a "whites only" clause (McLagan, 1980). Additionally, in the 1800s, the Pacific Northwest strictly enforced federal immigration laws against

newcomers from Asia (Hirota, 2017). Despite their controversial past, the Pacific Northwest is now widely recognized as one of the more socially liberal areas of the United States. Historians and scholars alike argue this might be because the Pacific Northwest strives to maintain the positive aspects of its history while also accommodating for economic and demographic change (Abbot, 2001). The integration of new-age economic and demographic changes contributes to progressive views (Abbot, 2001). This is evident in recent Gallup polls, which indicate that more Pacific Northwesterners identify as liberal than conservative (Saad, 2018). Liberal Pacific Northwesterners espouse modern notions of social justice, many of which are adaptations of the "radical" ideas the area was originally founded upon (Johnston, 2006; Redding, 2001). Today, these modern notions of justice encourage both individuals and macrosystemic institutions to be more inclusive – ideas embedded in SPD (Redding, 2001). Given the Pacific Northwest as this sample's backdrop, it is possible that emerging adults, whether minority or majority racial/ethnic status, will endorse greater levels of SPD. Racial/ethnic emerging adult minorities may achieve this through more salient racial/ethnic identities and Caucasian emerging adults through more liberal and progressive worldviews.

Stability of Sociocognitive Vocational Outcomes

In partial support of study hypotheses, my results suggest that all study participants' sociocognitive vocational outcomes are uniquely consistent between waves 6 to 7 (between the ages of 20 to 21.5) but participants demonstrated some instability between waves 7 to 8 (between the ages of 21.5 to 23). The stability of sociocognitive vocational outcomes was moderated by race/ethnicity and sex, but not by PSE. Between

the ages of 20 to 23, male emerging adults, emerging adults with and without PSE, as well as multiracial and non-white emerging adults experienced vocational stability. In contrast, the sociocognitive vocational outcomes for Latinx participants are unstable between the ages of 20 to 21.5 and stable between the ages of 21.5 to 23. For white participants, sociocognitive vocational outcomes are stable between the ages of 20 to 21.5 and unstable between the ages of 21.5 to 23. Lastly, for female participants, sociocognitive vocational outcomes are stable between the ages of 20 to 21.5 and are unstable between 21.5 to 23.

These study findings are important because emerging adulthood is defined by change and transitions in vocational development, particularly as emerging adults enter the world of work for the first time. In a meta-analysis examining longitudinal vocational stability, Low and colleagues (2005) found that vocational outcomes remained stable and were unchanged during much of adolescence. Vocational outcomes increased significantly during college years (ages 18-22), and then remained unchanged for the following two decades (Low et al., 2005). While some results of the current study are consistent with this, others are not. Current study findings indicate that Latinx, Caucasian, and female emerging adults experience variability in their vocational development. Because white women compose the largest racial/ethnic subgroup of women, I consider how Caucasian women specifically might experience differences in the stability of their sociocognitive vocational outcomes between waves 7 to 8. For both Latinx emerging adults as well as Caucasian female emerging adults, it is likely their variability in vocational stability is due to differences in vocational barriers and differences in academic and vocational trajectories.

Vocational development theory suggests that vocational development patterns and outcomes are different for racial/ethnic minorities (Betz & Fitzgerald, 1995; Tracey & Hopkins, 2001; Tracey & Robbins, 2005). For example, they often perceive greater vocational barriers, which results in a narrower range of occupations considered (McWhirter, 1997; Swanson & Tokar, 1991) and greater vocational instability (Betz & Fitzgerald, 1995; Hansen, 1992; Lattimore & Borgen, 1999; Tracey & Hopkins, 2001). In addition, empirical research suggests that the instability and growth in vocational outcomes between the ages of 18 to 22, as identified by Low and colleagues' meta-analysis (2005), is primarily driven by educational experiences. That is, vocational development and growth in vocational outcomes for adolescents and young adults has been linked, almost exclusively, with intentions to pursue PSE and PSE experiences (Blinne & Johnston, 1998; Navarro et al., 2007). Therefore, I consider how pursuit of postsecondary education influences the vocational development patterns for Latinx and Caucasian female emerging adults. In the discussion below, it is important to consider the following: while I was able to examine how race/ethnicity, sex, and PSE uniquely moderate model results, considering how two or more variables (e.g., sex and PSE, race/ethnicity and PSE, or sex and race/ethnicity) simultaneously interact to moderate model results was beyond the scope of the study. Therefore, I draw upon demographic trends and preliminary descriptive analyses to explain differences in emerging adult stability.

Race/ethnicity moderates model results such that the sociocognitive vocational outcomes of white emerging adults are stable between the ages of 20 to 21.5 and unstable between the ages of 21.5 to 23; the sociocognitive vocational outcomes of Latinx

emerging adults are unstable between the ages of 20 to 21.5 and stable between the ages of 21.5 to 23. There are limited empirical studies, which test similar stability patterns that serve as points of comparison. Historically, scholars have dedicated more time understanding the longitudinal vocational development patterns for adolescents. Unlike the results from this dissertation study, extant literature on Latinx youth suggest that they demonstrate vocational stability. For example, Tracey and Hopkins (2001) considered the vocational stability for adolescents of color (i.e., African American, Native American, Asian American, Anglo American, Mexican American, Other Latino American, and Multiracial American) between 8th, 10th, and 12th grade. The authors found that vocational outcomes were stable for all racial/ethnic groups, suggesting little variability between groups (Tracey & Hopkins 2001). Additionally, Diemer and colleagues (2010) found that African American, Asian American, and Latinx adolescents experience stability between 10th and 12th grades. While current study results differ from empirical literature, results are congruent with extant literature that suggests (1) vocational development patterns and outcomes are different for ethnic/racial minorities and (2) growth in vocational outcomes occurs with additional education.

One possible explanation for this change in stability across time might be due to the number of Latinx participants pursuing college. At wave 6, 39.7% of Latinx emerging adults were pursuing PSE. At waves 7 and 8 respectively, 46.3% and 49.1% of Latinx emerging adults were pursuing PSE. As previously discussed, academic achievement and pursuits often support the vocational development process for emerging adults (Basuil & Casper, 2012; Cohen et al., 2003; Creed & Hughes, 2013). Additionally, scholars suggest that for racial/ethnic minorities specifically, educational efforts may correct previous

occupational misconceptions (e.g., encouraging individuals to consider a wider range of occupational avenues available to them; Low et al., 2005). Therefore, it is possible that as Latinx emerging adults pursued PSE, their vocational exploratory activities increased, and self-efficacy and future expectations became clearer and more stable. Congruent with meta-analysis findings (Low et al., 2005), with increased vocational exploratory activities, Latinx emerging adults improve upon their career-related self-efficacy through increased learning activities and mastery experiences (Bandura, 1997). More educational experiences enable Latinx emerging adults to feel more hopeful about their vocational future, which in turn improves their future career orientation.

Moderation study results also indicated that race/ethnicity moderates the longitudinal development process for white emerging adults and sex moderates sthe sex moderate the longitudinal development process for women. Findings indicate that while the sociocognitive vocational outcomes of male and non-white emerging adults were stable between the ages of 20 to 23, white and female emerging adults experienced stability between the ages of 20 to 21.5 but instability between the ages of 21.5 to 23. These present dissertation study findings differ from those of Low and colleagues (2005), which indicate that men and women endorsed similar levels of vocational outcomes and were similarly stable from adolescence to adulthood. Additionally, Schultz and colleagues (2017) found that the vocational interests of both men and women were similarly stable. However, Schultz and colleagues (2017) also acknowledged that this stability is contrary to theoretical literature suggesting that women experience more limited vocational opportunities than men. Because white women compose the largest

racial/ethnic subgroup of women, I consider how Caucasian women specifically might experience differences in the stability of their sociocognitive vocational outcomes.

A possible explanation for these sex and racial/ethnic differences pertains to the increasing rates at which women are pursuing postsecondary education (King, 2006). Women pursue PSE immediately after high school (approximately between the ages of 18 to 21) at higher rates than men (Combs et al., 2010; King, 2006). In addition, a federal longitudinal study suggested that more women enter postsecondary education with the goal of attaining a bachelor's degree in five years than men with similar ambitions (King, 2006). These trends are also evident in the current PAL2 emerging adult sample. For example, at wave 6, 56.6% of all females had completed at least one year in college compared to 36.7% of all males. At wave 7, 40.7% of females (34.7% of males) had completed at least one year in college and 5.1% of females (1.5% of males) had completed college. Similar trends are found at wave 8: 15% of females (9.5% of males) had completed college altogether. Furthermore, these trends are even more apparent when comparing the intersection of race and sex. At wave 6, 71.8% and 2.8% of Caucasian women had completed at least one year and two years of college respectively. In comparison, only 39.5% and 1.3% of Caucasian men had similar achievements. At wave 7, 14.3% of Caucasian women had received a bachelor's degree compared to 3.3% of Caucasian men; at wave 8, 31.1% of Caucasian women had received a bachelor's degree compared to 14.8% of Caucasian men. Consequently, women remain in the familiar academic environment until they are 21 years of age and enter the world of work for the first time at approximately 21- or 22-years of age. Therefore, for this population, their sociocognitive vocational outcomes are stable until approximately 21 years of age

and their vocational outcomes become less stable as they enter the world of work and obtain jobs for the first/full time.

As previously discussed, there is a breadth of research that indicates one's vocational development and outcomes are inextricably linked to their academic achievements and pursuits (e.g., Betz & Borgen, 2000; Betz & Schifano, 2000; Blinne & Johnston, 1998; Diegelman & Subich, 2001; Elsworth et al., 1999; Low et al., 2005; Marshall & Wijting, 1980; Nurmi et al., 2002; Regenold et al., 1999). Past findings suggest that individuals experience greater vocational outcomes while in school, as they are engaged in coursework and academic activities that stimulate their vocational development (Low et al., 2005). It is possible that for emerging adult Caucasian women, the transition between high school to college is seamless, resulting in stable vocational outcomes until the age of 21.5 (through wave 7). Similar to high school settings, college campus settings provide them with ample opportunities to link their wide variety of vocational interests with the breadth of academic opportunities available (Basuil & Casper, 2012). For example, high schools often employ guidance counselors to support students academically and aid in college and workforce applications. Similarly, college campuses often offer career counseling services for students as they consider how to integrate their college majors with work-related skills. Such services allow individuals to link vocational interests with concrete opportunities, which additionally promotes vocational stability (Basuil & Casper, 2012). This seamless transition and similarly supportive environments may foster hopefulness about one's future vocation. Thus, as Caucasian emerging adult women pursue college immediately after high school, their

ability to integrate their academic interests with vocational interests and goals may contribute to stable vocational outcomes during college years.

After achieving their bachelor's degrees, these same Caucasian women are suddenly faced with the world of work. Once an individual enters the world of work, they are faced with decisions about whether to stay with their choice, or to change to another occupation, thus re-evaluating their longstanding vocational interests (Schultz et al., 2017). For example, while some seek meaningful work experiences, others may look at work not as a form of self-expression and identity fulfillment, but as a way to make a living and seek only to get a stable job that pays a decent wage. The current study suggests that because Caucasian women in this sample (1) pursue college immediately after high school at higher rates and (2) graduate at higher and faster rates than their male counterparts, their vocational development is not stable as they consider how their academic pursuits translate to the world of work.

While the results of Caucasian female emerging adults indicate greater instability between waves 7 and 8, it should be noted that their levels of sociocognitive vocational outcomes was higher than expected at wave 8 given their levels at wave 7. As discussed in the Literature Review, past research has found that females experience higher levels of self-efficacy when they pursue traditionally female-dominated occupations (Betz & Hackett, 1981). Furthermore, theoretical research regarding self-efficacy indicates that experiences of success will build one's career-related self-efficacy beliefs (Bandura, 1997). Thus, women who perceive themselves as competent and self-assertive are also more career-oriented, more achievement-oriented, and display higher self-reported capability estimates (Greenglass & Devins, 1982; Marshall & Wijting, 1980; Orlofsky &

Stake, 1981). If an individual is predisposed to higher levels of competence, then additional success experiences will likely boost these levels even more. Therefore, study results indicate that as Caucasian female emerging adult enter into the world of work, they experience a burst of growth in their career-related self-efficacy and future career-related outcome expectations. This growth explains the increase in their levels of sociocognitive vocational outcomes at wave 8. This is interesting to note because the model was not moderated by race/ethnicity for multiracial participants; however post-hoc analyses indicated significant differences in the mean levels of sociocognitive vocational outcomes for this population.

Post-Hoc Considerations for Sociocognitive Vocational Outcomes

Similar to post-hoc analyses for SPD, I conducted post-hoc analyses to examine differences in the mean levels of sociocognitive vocational outcomes, only on race/ethnicity, a non-dichotomous moderator. Post-hoc analyses indicate that the vocational development processes significantly differ for multiracial participants from that of African American participants. Study results suggest that at both waves 7 and 8, multiracial emerging adults' sociocognitive vocational outcomes levels significantly differed from those endorsed by African American emerging adults (see Table 9). At wave 7, multiracial participants ($M = 1.89$, $SD = .80$) demonstrated higher sociocognitive vocational outcomes than did African American ($M = 1.59$, $SD = .56$) participants. At wave 8 however, the opposite occurred (multiracial participants: $M = 1.24$, $SD = .84$, African American participants: $M = 1.65$, $SD = .67$). This empirical variability is consistent with the theoretical literature that suggests that the vocational development process for multiracial is at higher risk due to their feelings of isolation from monoracial

groups (Carter & Constantine, 2000; Herman, 2009; Hurd et al., 2013; Jackson & Neville, 2002; Perry, 2008).

Only in the last 20 years have publications regarding multiracial identity and the multiracial population emerged (Thompson, 2006). Multiracial participants often do not comprise such a large percentage of study samples. For example, Diemer (2009) used a diverse sample when examining the occupational attainment of youth of color, but only a total of 6.6% of multiracial participants were included. In a separate study, multiracial individuals could only report identification with one racial/ethnic group and so the study design did not consider multiracial identity (Diemer, 2007). In comparison, multiracial participants comprised over 20% of our emerging adult sample. Scholars now argue that the rapid growth in the number of people who identify as multiracial has generated a need to better understand the unique experiences and consequences associated with such a multiracial heritage (Shih & Sanchez, 2009). Therefore, a strength of our study was considering the development of multiracial emerging adults and consider how their unique multiracial heritage contributes to the stability demonstrated by this subsample.

The theoretical "marginal man" paradigm suggests that the challenges of grappling with a multiracial identity impacts the vocational development process (Herman, 2009). For example, mixed-race people are marginalized and isolated from all monoracial groups and their loyalty is divided (Herman, 2009). Such challenging experiences are associated with low self-esteem, racial identity confusion, and subsequent challenges, some of which impact vocational development (Herman, 2009). For example, the vocational development process relies on social modeling, whereby seeing people similar to oneself succeed raises the observer's beliefs in their own abilities to succeed

(Bandura, 2008). Due to racial identity confusion, it is increasingly more challenging for mixed-race people to develop a sense of self-efficacy. Given variations in how multiracial individuals adopt monoracial attitudes, it is possible that multiracial emerging adults endorse varied levels of sociocognitive vocational outcomes across time.

In addition to grappling with a multiracial identity, the one-drop rule indicates that a mixed-race person is automatically assigned to the group with the lowest social value. However, the mixed-race person's environment and how they are treated in that environment has a significant impact on self-identification. Meaning that if a person is perceived as black or African American, for example, then they will be treated as such and will likely self-identify as black or African American (Herman, 2008; 2009). Alternatively, if a person exhibits "white passing" features (Khanna & Johnson, 2010) and is perceived as white, they will be treated as such and will likely self-identify as white or Caucasian. Thus, to the extent that an individual is treated as a person of color with "low social value," they may develop a racial identification and vocational achievement orientation that is similar to those of monoracial descent in that corresponding racial category (Herman, 2008).

Educators and public policy makers use theories such as status attainment theory (Howell & Frese, 1979), expectation status theory (Cohen & Roper, 1972), and oppositional culture theory (Ogbu, 1989) to represent the range of thinking on differences in academic and vocational achievement across racial/cultural groups. None of these theories, however, address the complexities and differences in achievement among America's growing number of multiracial individuals as each of these theories assumes that monoracial cultural style drives achievement behavior (Herman, 2009). These

dissertation study findings are the first to identify differences in the longitudinal vocational development patterns for multiracial individuals. Educators and public policy makers can current study findings to inform how to support multiracial individuals in their vocational development.

Sociocognitive Vocational Outcomes Measurement

Present study results must be interpreted with caution because my measurement of sociocognitive vocational outcomes is distinct as it is a composite of only two components of the entire Social Cognitive Career Theory model (SCCT; Lent & Brown, 1996, 2013; Lent et al., 1994, 2000). The SCCT model includes a multitude of vocational outcomes including career-related self-efficacy, future outcome expectations or future career orientation, vocational interests, goals, and actions, as well as occupational attainments (Lent et al., 1994). It is possible that creating a composite did not allow variability in these outcomes to emerge.

Additionally, according to Fouad and Guillen (2006), existing measures used to assess outcome expectations may not adequately capture the construct as it was intended. For example, scholars suggest there are two distinct factor structures within outcome expectations: content (e.g., math/science, art) and process (e.g., career decision making; Fouad & Guillen, 2006). While measures developed typically have acceptable internal consistency, they often do not include all of the distinct domains relevant to and influential of future outcome expectations. Further, many career-related outcome expectation measures ask participants to respond to positive outcome statements only (e.g., “in the next five years, I feel confident that I will be happy” or “I can imagine what my life will be like when I’m grown up” or “I feel confident that I will achieve my

goals"). The positive outcome statements limit participant expressions regarding how they truly feel about their future vocational prospects (Swanson & Gore, 2000). Therefore, scholars agree that more fundamental research is needed to accurately capture participants' career-related outcome expectations, both in the area of measurement as well as in the unique factors that influence this construct (Fouad & Guillen, 2006; McWhirter, Crothers, & Rasheed, 2000; Swanson & Gore, 2000). The future outcome expectation factor, derived from the previously validated three-factor EFA (McCarthy et al., 2015) indicated good internal validity; however, based on the aforementioned scholarly critique, this measure may not sufficiently or adequately measure future outcome expectations. Limitations in this future vocational outcome expectations measure may not reflect an accurate representation of emerging adult vocational development.

Summary of Emerging Adult Stability

In general, study findings indicate that a majority of emerging adults experience trait-like stability with respect to their sociopolitical and vocational development. The SPD of all emerging adult participants was stable between the ages of 20 to 23. The sociocognitive vocational outcomes of specific groups, namely, male emerging adults, emerging adults with and without PSE, as well as multiracial and non-white emerging adults were stable between the ages of 20 to 23. However, the sociocognitive vocational outcomes of Latinx participants demonstrated instability between the ages of 20 to 21.5 but stability between the ages of 21.5 to 23. The sociocognitive vocational outcomes of Caucasian and female emerging adults were stable between the ages of 20 to 21.5 but demonstrated instability between the ages of 21.5 to 23. I was able to consider how

race/ethnicity, sex, and PSE uniquely moderate model results. However, considering how two variables (e.g., sex and PSE or race/ethnicity and PSE) interact to moderate model results was beyond the scope of the study. Overall, these findings are largely congruent with study hypotheses, which proposed that emerging adult SPD and sociocognitive vocational outcomes are stable between the ages of 20 to 23. While there are additional explanations, the stability of the two key study variables likely influences their cross-lagged relationship. The following section reviews why results did not support a causal relationship between SPD and sociocognitive vocational outcomes.

The Relationship Between Emerging Adult Sociopolitical Development and Sociocognitive Vocational Outcomes

Contrary to extant research, current study results did not reveal a predictive relationship between SPD and sociocognitive vocational outcomes over three years of emerging adulthood. There are several reasons for this difference.

The theoretical "oppositional culture" paradigm suggests that a greater consciousness of sociopolitical inequality and structural racism leads marginalized individuals to become less engaged with school and work (Diemer et al., 2010; Ogbu, 1989; Scott, 2007; Wayman, 2002). This paradigm argues that as marginalized youth become more acutely aware of structural inequality, they disengage from school-related pursuits and lower their vocational expectations. With greater awareness of structural inequality, marginalized youth espouse beliefs that the opportunities and rewards available to more privileged counterparts are unavailable to them and thus begin to disengage (Diemer et al., 2010; Ogbu, 1989; Scott, 2007; Wayman, 2002). While

theoretically, there is an inverse relationship between SPD and academic achievement, there is mixed empirical evidence of this.

There is debate as to whether SPD, including a greater consciousness of sociopolitical inequality, leads marginalized individuals to become more or less engaged with their academic pursuits and vocational development (Diemer et al., 2010). Empirically, scholars have found that, for youth, the relationship between SPD and academic engagement varies. For example, Carter (2006) found that even when African American and Latinx youth had a greater consciousness of inequality, some chose not to engage with school, as it was seen as an inequitable system, while others became more engaged with academics and work. Equally variable, Conchas (2001) found that low-SES Latinx youth were equally engaged with their academic pursuits irrespective of their level of understanding of sociopolitical inequities.

Diemer and his colleagues (2010) found that 10th grade SPD positively predicted 12th grade vocational expectations and work salience. This dissertation study shows that the relationship between SPD and vocational outcomes differs for this sample of emerging adults, likely due to differences in development, sample diversity, and measurement construct, when compared to adolescent populations. While Diemer and his colleagues found a predictive relationship between SPD and vocational outcomes, they also found that African American, Asian American, and Latinx youth demonstrated stable levels of SPD, vocational expectations, and work salience between 10th and 12th grades. It is important to note that the analyses conducted by Diemer and his colleagues (2010) did not separate individualized stability trends from the overall group stability trends, as was done in the current study. Unfortunately, there are no other studies that

separate individual processes from group processes, and I was unable to compare how trait-like stability specifically influences the relationship between SPD and sociocognitive vocational outcomes.

I initially intended to examine the stability of and relationship between SPD and sociocognitive vocational outcomes with a cross-lagged panel, which assumes each participant varies similarly across time. I instead used a random-intercept cross lagged panel model, which isolates within-person processes from the between-person level (see Appendix C for a full justification on the use of the random-intercepts cross lagged panel model). It is possible that because emerging adults demonstrate trait-like stability (e.g., each individual demonstrates consistency) for both SPD and sociocognitive vocational outcomes, they do not exert a causal influence on one another. Patterns of stability are not entirely consistent with a transactional relationship between the same variables (Arnett, et al., 2012). Variations in the levels of SPD or sociocognitive vocational outcomes over time are often necessary to support a transactional or predictive relationship between these two variables.

The correlational relationship between SPD and sociocognitive vocational outcomes indicates that they are positively and significantly correlated across all three waves. This is consistent with extant literature; research suggests that overall, SPD is related to youth of color's vocational identity and career commitment (Diemer & Blustein, 2006), vocational expectations (Diemer & Hsieh, 2008), and occupational attainment (Diemer, 2009). While sociocognitive vocational outcomes and SPD are significantly correlated with one another, they are only minimally correlated with one another (wave 6: $b = .29$, $p < .05$, 95% CI [0.23, 0.46], wave 7: $b = .25$, $p < .05$, 95% CI

[0.21, 0.47], wave 8: $b = .25$, $p < .05$, 95% CI [0.18, 0.44]). Low correlations often signal an unsubstantial or minimal relationship between two variables (Odom & Morrow, 2009; Taylor, 1990). Thus, in addition to trait-like stability demonstrated by the sample, low correlations further substantiates the premise that SPD and sociocognitive vocational outcomes do not have a strong enough relationship to predict one another across time. Of note, these two constructs are more strongly correlated with one another for emerging adults of color when compared to their white counterparts. For example, SPD and sociocognitive vocational outcomes at wave 6 were more strongly and positively correlated for emerging adults of color ($r = .31$, $p < .01$) when compared to their white counterparts ($r = .22$, $p < .05$). This stronger correlation suggests that the relationship between SPD and sociocognitive vocational outcomes may be stronger for racial/ethnic emerging adults than their white counterparts.

Study Contributions and Limitations

The current study contributes to extant literature in many ways. Most importantly, this dissertation study is the first to examine the longitudinal stability of and relationship between SPD and sociocognitive vocational outcomes for emerging adults. Furthermore, because data were driven by an extraordinarily diverse sample, we are able to consider how developmental processes differ across emerging adult subgroups. Study findings contribute to the existing literature by (1) identifying unique contextual and demographic influences of emerging adult vocational development and outcomes, (2) considering time points at which emerging adults experience greater stability, (3) informing future interventions that effectively facilitate emerging adult vocational development and the

overall transition into adulthood, and (4) raising additional research questions to advance the study of emerging adult development.

Latinx, Caucasian, and female emerging adults demonstrate periods of vocational stability and instability between the ages of 20 to 23. Findings indicate that while some emerging adults' sociocognitive vocational outcomes are stable, others are not. This illustrates how varied the vocational development process is across emerging adult subgroups, particularly during such a short time period. This is a critical finding denotes that the time points at which emerging adults reach vocational stability varies by race/ethnicity and sex. Furthermore, all emerging adults demonstrated similarly moderate to high levels of SPD. This is an important contribution as it is likely that both proximal and distal contextual influences one's SPD levels. The current study only considered stability trends across three years of emerging adulthood. Emerging adults likely demonstrate variability in stability across additional developmental domains and from 18- to 25-years of age. Implications of these contributions are discussed further below.

While this study contributes to extant literature in unique ways, this study is not without its limitations. First, the current study relied on self-report data. The nature of self-reported data can be problematic because it introduces the possibility of biases in response due to social desirability. Use of data collected with other people and using different methods would increase the validity of the data. A second limitation of this study involves the extent of missing data. Although FIML was used to address these missing data, it is possible that the missing data contributed to error variance in FIML.

Third, in order to create the two-factor sociocognitive vocational outcome composite, I conducted a CFA, from an existing EFA established by McCarthy et al.

(2015). A CFA generally requires a large sample, and having a stable solution is largely dependent on the sample size (Comrey & Lee, 2016). According to Comrey and Lee's (2016) criteria, a sample between 300 and 400 participants is considered "good." Comrey and Lee (2016) urge researchers to obtain sample sizes of 500 or more whenever possible. A larger sample size may have reduced or eliminated issues related to convergence when considering the moderating effect of race/ethnicity on SPD and sociocognitive vocational outcomes (Anderson & Gerbing, 1984). However, such a sample size was not available in the PAL2 data. Additionally, the use of a composite outcome does not always lead to an increase in evidence (Freemantle et al., 2003). By using a composite outcome, we can establish "big picture" conclusions about emerging adult vocational development. However, the measured effect can be diluted by an outcome that has no effect when combined with a more critical measure it becomes increasingly more difficult to draw more simplistic or narrowed conclusions.

Fourth, due to insufficient sample sizes in the current study, we were unable to examine how race/ethnicity moderated the model with SPD and sociocognitive vocational outcomes for all seven racial/ethnic groups (see Table 2). Thus, I chose to aggregate the experiences of non-white participants, in which we included all emerging adults of color. Altogether, I was successfully able to compare Latinx participants, multiracial participants, and non-white participants with white participants. One drawback to aggregating all non-white participants is that I was unable to make any nuanced comparisons regarding the sociopolitical and vocational development of all racial/ethnic subgroups.

Lastly, the current study does not account for social class differences as the primary PAL2 data regarding social class was collected only via parent self-report survey. Approximately one third of the sample's emerging adults financially supported themselves, which tends to be considered atypical in the emerging adult literature (Wightman, Patrick, Schoeni, Schulenberg, 2013). Scholars suggest that parental financial support is one influence that facilitates the delay into adulthood. Researchers agree that social class plays a role in the extent to which parents can financially support their emerging adult children (Arnett, 2007; Arnett & Turner, 2011). While social class does contribute to distinct expressions of emerging adulthood, particularly as parents are able to financially contribute to their emerging adult children, this developmental period is not unique to only middle and upper class populations. Themes of emerging adulthood, as described by theoretical and empirical literature, still occurs for low-SES emerging adults, despite potential financial constraints (Arnett & Tanner, 2011).

Implications for Future Research and Practice

This dissertation has several implications for future research and practice regarding emerging adult development. Because this is the first study of its kind, it serves as a springboard from which future research can consider emerging adult sociopolitical and vocational development processes. Additionally, this study highlights the importance of considering unique factors that impact emerging adult development.

Although SPD has been shown to improve academic and vocational outcomes among adolescents, for this sample of emerging adults, I found no evidence for a relationship between SPD and vocational development. It is possible that adolescence serves as a critical time point during which they can both crystalize their worldview and

beliefs, thus promoting their SPD and driving growth in their vocational outcomes. Alternatively, I was only able to consider the stability of sociopolitical and vocational development between the ages of 20 to 23. Considering the stability of these constructs across the entire span of emerging adulthood (e.g., between the ages of 18 to 25; Arnett, 2000) will be important to accurately understand emerging adult developmental transitions and stability. Future research might focus on expanding the duration of longitudinal studies to include experiences during both adolescence and emerging adulthood to understand the critical time points during which sociopolitical and vocational development are stable. Scholars and interventionists should be mindful of timing (e.g., at what time points during adolescence or emerging adulthood) to target vocational development.

It will also be important for scholars to consider what additional factors promote vocational stability among a diverse population of emerging adults. The current study measured vocational outcomes via a composite informed that included two SCCT constructs (career-related self-efficacy and future career orientation). The vocational development process is complex and comprised of many different parts. Future studies might consider measuring different aspects of the vocational development process to understand how the stability of vocational development differs based on various outcomes. Additionally, rather than utilizing a composite, future studies might examine the stability of precise vocational outcomes. For example, scholars might consider how self-efficacy uniquely varies in comparison to future career orientation. Scholars and interventionists should be mindful of what vocational outcomes they assess to ensure vocational stability across all vocational domains.

Research suggests that the vocational development process differs for individuals of color and those from low SES backgrounds (e.g., Diemer, 2009; Diemer & Blustein, 2006; Diemer et al., 2006; Diemer & Hsieh, 2008; Diemer et al., 2010). As much of our moderation analyses relied on aggregated non-white emerging adult participants, it was challenging to make any nuanced comparisons regarding the sociopolitical or vocational development of all racial/ethnic subgroups available in the data. Future research might make efforts to collect data with greater racial/ethnic subgroup sample sizes. Further research is also necessary to examine the similarities and differences that occur for emerging adults across socioeconomic backgrounds, particularly because social class intersects with one's ability to pursue postsecondary education. This will enhance our understanding of how the stability of and relationship between SPD and sociocognitive vocational outcomes differ across emerging adult subgroups. Furthermore, much of my discussion hinges upon how postsecondary education, sex, and race/ethnicity interact with one another to contribute to study findings, Future research may also consider how two variables (e.g., sex and PSE, race/ethnicity and PSE, and sex and race/ethnicity) interact to moderate the stability of and relationship between SPD and vocational outcomes.

I found that the SPD for emerging adults in the sample, all recruited from the Pacific Northwest, is stable. Thus, scholars might consider the context in which emerging adults develop and how the sociopolitical development process differs based on context. Specifically, researchers might look at emerging adults' SPD experiences across the United States to gauge the role context plays. For example, scholars might compare the experiences of emerging adults living in rural and urban areas. This may provide us with

a better understanding of how one's experiences of discrimination or understanding of sociopolitical inequities vary across context.

Furthermore, because of the self-report nature of this data, use of data collected with other people (e.g., not self-report) and using different methods would increase the validity of these results. For example, scholars might consider qualitative research via open-ended interview questions, as opposed to survey instruments. Use of alternative data collection methods may offer a substitute to the quantitative methodological challenges inherent to assessing more nuanced constructs. Qualitative research may be more effective to identify the differences in the relationship between SPD and vocational outcomes when the population is diverse. Further, a mixed-methods approach, whereby scholars can include both quantitative and qualitative methods, may more accurately inform interventions that improve participants' SPD and vocational development. Scholars might also conduct analyses on quantitative data collected to consider both trait-like and group stability as individual expressions of stability may differ from group trends.

Conclusion

The many influences on emerging adult SPD and vocational development can be difficult to quantify; however, studying these variables continues to be important due to the influential role that work and vocation play in people's lives. Some view their vocational trajectory as not only a way to provide financially for themselves and their families financially, but also as a way to experience a rewarding and meaningful life that meets other aspects of their well-being. This study examined at least a small portion of important factors that may influence emerging adult vocational development, for a

diverse sample of emerging adults. Although not all emerging adults experience the primary salient themes, identified by the literature (e.g., work/vocation, family/relationships, and worldviews/beliefs), it remains important to ensure emerging adults feel supported during their transition to adulthood, especially for their vocational transition. Given the amount of time, education, and training necessitated for vocational development, it is important to understand how this process is or is not fostered in emerging adults. It also remains important to understand how emerging adults, especially those from more marginalized backgrounds, experience the SPD process. The ever-evolving diversity in the United States and changes in our sociopolitical climate makes it more important to provide emerging adults the tools and confidence to create a more equitable society, with the hopes that they can also feel efficacious and hopeful when pursuing all of their vocational interests and goals.

APPENDIX A

EXPLORATORY FACTORY ANALYSIS FINDINGS BY MCCARTHY AND COLLEAGUES (2015)

The emerging adult sociocognitive vocational outcome factors were based on preliminary exploratory factor analysis (EFA) findings established by McCarthy and colleagues (2015). Items and variance accounted for by each factor, as calculated by McCarthy and colleagues (2015), are provided in Table 12. Results from this study extracted three factors from the 21 items that accounted for 59% of the total variance: *(1) Career Navigation* (seven items accounting for 37% of the variance), pertaining to emerging adults' confidence in navigating career-related activities such as career decisions and finding information or resources about jobs or careers of interest, *(2) Self-Efficacy* (five items accounting for 14% of the variance), pertaining to the degree of freedom at which parents of emerging adults' allow them to make decisions, and *(3) Future Orientation* (nine items accounting for 8% of the variance), pertaining to emerging adults' views on their future, confidence in achieving goals in the future, and how positively/negatively they felt towards the future (McCarthy et al., 2015). Figure 10 displays a diagram of the model tested. Using this preliminary EFA model, the model fit was assessed using lavaan version 0.5-23 (Rosseel, 2011) in R version 3.6.1. The goodness-of-fit indices for the CFA were as follows: chi-square statistic, $\chi^2(3) = 5{,}252.78$, $p < .001$, CFI = 0.87, and TLI = 0.86, RMSEA = .09, 90% CI [.09, .10], indicating a less than good fit, however, results did not exceed 0.10, which would provide evidence for rejection (Browne & Cudeck, 1993; Hoyle, 1995).

Table 12

Summary of Preliminary Study Exploratory Factor Analysis Results for PAL2 Emerging Adult Career Interests (from McCarthy et al., 2015)

Factor and Item	Factor loading	*M*	SD
Factor 1: Career Navigation (7 items)		2.43	0.63
16. Able to make career decisions?	0.85		
18. Confident in your ability to set and achieve long-term goals for yourself?	0.84		
17. Confident in your ability to set and achieve short-term goals for yourself?	0.81		
14. You have a good sense of your future job or career path?	0.68		
15. Able to find information about jobs or careers that you're interested in?	0.66		
19. Able to find resources and people to help you achieve your job/career goals?	0.64		
13. Confident that in the future you could find a satisfying job or career path?	0.63		
Eigenvalue = 8.20; Variance explained = 37.28%			
Factor 2: Self-Efficacy (5 items)		3.04	0.89
2. My parents allowed me to decide things for myself.	0.93		
4. My parents let me make my own life plans for things I want to do.	0.91		
3. My parents allowed me to choose my own direction in life	0.88		
1. My parents, whenever possible, allowed me to choose what to do	0.80		
5. My parents were usually willing to consider things from my point of view	0.69		
Eigenvalue = 3.15; Variance explained = 14.32%			
Factor 3: Future Orientation (9 items)		3.49	0.75
10. In the next five years, I feel confident that I will be happy	0.70		

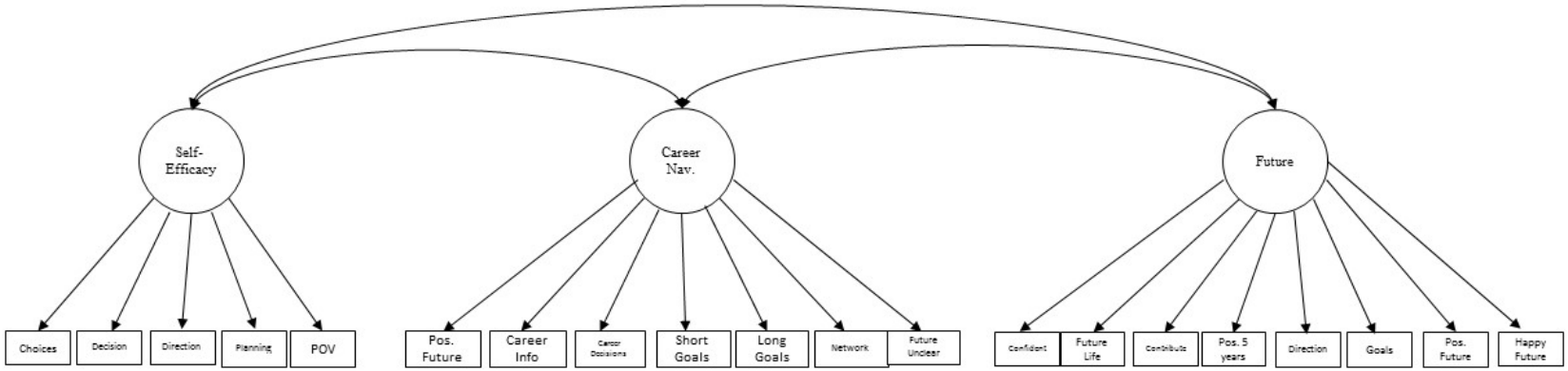
Table 12, continued

Factor and Item	Factor loading	*M*	SD
2. I can imagine what my life will be like when I'm grown up	0.63		
5. I feel confident that I will achieve my goals.	0.61		
8. How do you think your own life will go in the next five years? Do you think it will get better or worse?	0.61		
6. I think my future will be positive	0.60		
3. I can imagine myself being an important adult in my community	0.56		
7. Looking ahead to the next five years, do you think that things in the rest of the world will get better or worse?	0.50		
1. When I grow up, I know what I want to be.	0.45		
4. The future seems unclear and confusing to me.	-0.32		
Eigenvalue = 1.78; Variance explained = 8.12%			
Cumulative percent of explained variance = 59.72%			

Note. N = 123. Final solution = 3 factors with 21 total items (ranges 0-4, 0-3, 1-5, 1-10). Pattern Matrix derived with Principal Axis Factoring extraction, Oblimin (oblique) rotation with Kaiser Normalization. The rotation converged in 9 iterations.

After removing two items due to low factor loadings, the goodness-of-fit indices for the CFA were as follows: $\chi^2(3) = 4{,}689.81$, $p < .001$, CFI = 0.91, and TLI = 0.90, RMSEA = .08, 90% CI [.07, .90], indicating a good fit with the data. Items and variance accounted for by each factor after removing two items are provided in Table 13.

Figure 10. Emerging Adult CFA Career Development Model (McCarthy et al., 2015).



APPENDIX B

PRELIMINARY STUDY THREE-FACTOR CONFIRMTORY FACTOR ANALYSIS

Table 13

Summary of Preliminary Study Three-Factor Confirmatory Factor Analysis Results for PAL2 Emerging Adult Vocational Development (adapted from McCarthy et al., 2015) with Two Items Removed

Factor and Item	Standardized factor loading
Factor 1: Career Navigation (7 items)	
18. Confident in your ability to set and achieve long-term goals for yourself?	0.83
17. Confident in your ability to set and achieve short-term goals for yourself?	0.79
14. You have a good sense of your future job or career path?	0.77
16. Able to make career decisions?	0.76
13. Confident that in the future you could find a satisfying job or career path?	0.76
19. Able to find resources and people to help you achieve your job/career goals?	0.72
15. Able to find information about jobs or careers that you're interested in?	0.70
Factor 2: Self-Efficacy (5 items)	
3. My parents allowed me to choose my own direction in life	0.91
4. My parents let me make my own life plans for things I want to do.	0.90
2. My parents allowed me to decide things for myself.	0.90
1. My parents, whenever possible, allowed me to choose what to do	0.69

Table 13, continued

Factor and Item	Standardized factor loading
5. My parents were usually willing to consider things from my point of view	0.68
Factor 3: Future Orientation (7 items)	
5. I feel confident that I will achieve my goals.	0.84
6. I think my future will be positive	0.79
10. In the next five years, I feel confident that I will be happy	0.70
3. I can imagine myself being an important adult in my community	0.67
8. How do you think your own life will go in the next five years? Do you think it will get better or worse?	0.60
2. I can imagine what my life will be like when I'm grown up	0.57
7. Looking ahead to the next five years, do you think that things in the rest of the world will get better or worse?	0.28
Cumulative Cronbach's Alpha: .89	

Note. Two items from the Future Orientation scale are removed due to low factor loadings. Final solution = 3 factors with 19 total items (ranges 0-4, 0-3, 1-5, 1-10).

APPENDIX C

SUPPLEMENTARY ANALYSES

RATIONALE FOR RANDOM-INTERCEPTS CROSS-LAGGED PANEL MODEL

This section describes tests between the traditional cross-lagged panel model (CLPM) and the selected random-intercepts cross-lagged panel model (RI-CLPM) presented in the results section. I considered both a CLPM and a RI-CLPM to consider the longitudinal stability of SPD and vocational outcomes during three years of emerging adulthood (Hamaker et al., 2015). Because CLPM accounts only for temporal stability with autoregressive paths, this type of model will implicitly assume each participant vary similarly across time, with no consideration of trait-like individual differences (Hamaker et al., 2015). In contrast to a traditional CLPM, the RI-CLPM is advantageous because it allows for isolating the within-person process (i.e., cross-lagged paths) from the between-person level (i.e., random intercepts). The RI-CLPM assesses stability across time with latent factors (i.e., random intercepts) to capture stable between-person differences (Dietvorst et al., 2018; Hamaker et al., 2015). Because intervals between timepoints are equally spaced, I tested whether the effects each outcome variable has on one another remain stable over time by constraining the lagged parameters over time and conducting a Satorra-Bentler scaled chi-square difference test (Hamaker et al., 2015; Satorra and Bentler 1994). I initially estimated a CLPM with (1) autoregressive paths for SPD and sociocognitive vocational outcomes, (2) cross-lagged paths between SPD and sociocognitive vocational outcomes – both with no distinction of within or between individual changes – as well as (3) all within wave correlations between SPD and sociocognitive vocational outcomes. The CLPM had a good model fit ($\chi^2(4) = 64.02$, $p <$

0.001, CFI = 0.92, RMSEA = 0.18, 90% CI [.14, .22], SRMR = 0.06). The model fit of the RI-CLPM was also good, $\chi^2(1) = 0.87$, $p = 0.35$, CFI = 1.00, RMSEA = 0.00, 90% CI [.00, .12], SRMR = 0.01. Results of the Satorra-Bentler chi-square difference test suggested that the RI-CLPM fit the data better than the traditional CLPM ($\chi^2_{diff}(3)= 55.94$, $p = 0.001$). This suggests that stable between-person differences in SPD and sociocognitive vocational outcomes, as modeled through the latent random intercepts in the RI-CLPM, are better representation of the data when compared to a traditional CLPM.

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