

EXPANDING OUR UNDERSTANDING OF PURPOSE IN LIFE: INVESTIGATING  
CONTEXTS AND CHARACTERISTICS THAT AFFECT PURPOSE EXPLORATION AND  
CONTENT

A Dissertation

Presented to the Faculty of the Graduate School  
of Cornell University

In Partial Fulfillment of the Requirements for the Degree of  
Doctor of Philosophy

by

Rachel Ann Meyer Sumner

May 2015

© 2015 Rachel Ann Meyer Sumner

EXPANDING OUR UNDERSTANDING OF PURPOSE IN LIFE: INVESTIGATING  
CONTEXTS AND CHARACTERISTICS THAT AFFECT PURPOSE EXPLORATION AND  
CONTENT

Rachel Ann Meyer Sumner, Ph. D.

Cornell University 2015

There is an abundance of research on purpose in life, much of which focuses on one's overall level of or commitment to a purpose. In the three studies presented here, I focus on two facets of purpose that are less well-understood: exploration and content. Previous research on identity has linked ongoing exploration to adaptive functioning and internalizing symptoms, so in the first study, structural equation modeling was used to investigate the relationships between both ongoing and past exploration in the domain of purpose with these outcomes. Results indicated that ongoing purpose exploration was negatively related to adaptive functioning and positively related to internalizing symptoms, but past purpose exploration was not significantly related to either outcome. In an effort to extend existing work on purpose, much of which utilized college student samples, the second study compared adults who graduated from college to adults with no or some college experience on a number of dimensions related to purpose development, including the strategies of exploration, overall level of purpose, and the content of one's purpose. The relationship between purpose and psychological assets such as agency and subjective well-being was also compared across groups. Results demonstrated that there were no differences by education level with regard to overall level of purpose or one's purpose exploration, but education interacted with purpose to shape purpose content and purpose's relationships with agency and negative affect. Another individual characteristic, gender, was investigated in the

third study, which examined perceived and actual gender differences in purpose content. In Study 3.1, participants exhibited gendered perceptions of purpose content, believing that women were more likely to pursue prosocial and creative purposes while men were more likely to pursue financial and personal recognition purposes. These perceptions were partially reflected by gender differences in self-reported purpose content. In Study 3.2, the relationship between purpose content and the degree to which participants had explored and committed to a purpose was different for males and females. Overall, findings indicated that purpose exploration and content can be influenced by timing, education, and gender. The discussion focuses on implications for the study of purpose development.

## BIOGRAPHICAL SKETCH

Rachel Sumner completed her Bachelor of Arts in Psychology at William Smith College in 2008, where she was awarded the Dr. Stephen L. Cohen Prize in Psychology. She then spent two years working as a research assistant for Drs. Geoffrey Cohen and Valerie Purdie-Vaughns on their longitudinal field study testing self-affirmation interventions to reduce stereotype threat in middle school classrooms. As a graduate student, Rachel was awarded a Cornell University Fellowship and a National Science Foundation Graduate Research Fellowship. While at Cornell, she worked as a research assistant for Drs. Wendy Williams and Stephen Ceci in the Cornell Institute for Women in Science and for Dr. Anthony Burrow in the Purpose and Identity Processes Lab.

Rachel has authored or co-authored articles published in journals including *Emerging Adulthood*, *Personality and Social Psychology Bulletin*, and *Child Development Perspectives*. She has also presented her work at the conferences of the Society for Research on Adolescence and the Society for Personality and Social Psychology.

## ACKNOWLEDGMENTS

The material in this dissertation is based upon work supported by the National Science Foundation Graduate Research Fellowship under Grant No. DGE-0707428.

I want to thank the members of my special committee, Drs. Anthony Burrow, Wendy Williams, and Stephen Ceci, for their guidance and support during my time at Cornell. I have learned so much from you – about how to conduct research, and also how to be a good person – and I am very grateful for your mentorship. Thank you for being part of the story of my life.

I also owe a debt of gratitude to Patrick Hill, who was so helpful and involved in my work that I think of him as an honorary committee member. You are a wonderful collaborator, and I'm so lucky that I got to know and work with you. Also, I hate to admit it, but us collaborating was Tony's idea.

The staff of the Human Development department has been incredibly helpful and kind. From my first day on campus, you made me feel welcome and supported, and I will miss your smiling faces.

What would I have done without the friends I've made during my time at Cornell? You wonderful people have made my life better in countless ways. I didn't think that graduate school was going to be so fun, and I will remember fondly the time we spent together in this gorgeous place.

Finally, I want to thank my family. You believe in me, make me laugh, feed me, and help me feel like I can explore the world and do good things. I wouldn't be where I am today without you, and I am overwhelmed with gratitude for all of you.

## TABLE OF CONTENTS

Biographical Sketch	iii
Acknowledgments	iv
Table of Contents	v
List of Figures	vi
List of Tables	vii
Chapter 1 <i>Introduction</i>	1
Chapter 2 <i>The Perils of Exploring Identity and Purpose</i>	5
Chapter 3 <i>Going To College Is A Luxury, But Cultivating A Sense Of Purpose In Life Is Not</i>	23
Chapter 4 <i>His and Hers Purpose in Life?: Perceived and Actual Gender Differences in Purpose Orientations</i>	50
Chapter 5 <i>Conclusion</i>	76
References	83

## LIST OF FIGURES

2.1. Model 1 (Study 1)	14
2.2. Model 2 (Study 1)	15
2.3. Model 3 (Study 1)	16
4.1 Participants' Gendered Ratings of Purpose Orientations (Study 3.1)	59
4.2 Relationships Between Cluster and Orientation by Gender (Study 3.2)	69

## LIST OF TABLES

2.1. Bivariate correlations, means, and standard deviations of study variables (Study 1)	13
2.2. Regression Weights from Structural Equation Models (Study 1)	17
3.1 Demographic Characteristics of Samples (Study 2)	36
3.2 Pearson Correlations, Means, and Standard Deviations of Study Variables (Study 2)	40
4.1 Pearson Correlations, Means, and Standard Deviations of Study Variables (Study 3.1)	57
4.2 Pearson Correlations, Means, and Standard Deviations of Study Variables (Study 3.2)	64
4.3 Correlations for Female and Male Participants Separately (Study 3.2)	66
4.4 Mean Scores and Standard Deviations of Purpose Variables for Each Cluster (Study 3.2)	68

## CHAPTER 1

### **Introduction**

It is very easy to find directions in life: driving directions are available with a few taps on a GPS; there are cookbooks full of directions for baking different kinds of pie; new furniture, gadgets, or tools come with directions so they can be assembled and/or used correctly. It is more difficult to find a direction *for* one's life, a sense of purpose "that organizes and stimulates goals, manages behaviors, and provides a sense of meaning" (McKnight & Kashdan, 2009, p. 242). While having a direction in life is not a necessity, feeling a sense of purpose is associated with a host of benefits related to physical and psychological health, including greater levels of self-esteem, positive affect, agency, being better able to cope with perceived changes in one's life, and living longer (Blattner, Liang, Lund, & Spencer, 2013; Boyle, Barnes, Buchman, & Bennett, 2009; Burrow, O'Dell, & Hill, 2010; Burrow, Sumner, & Ong, 2014; Hill & Turiano, 2014; Paradise & Kernis, 2002). Much of the existing work on this construct has focused on overall level of or commitment to purpose, and while this has increased our understanding of purpose's importance, there are many questions that remain unanswered.

Commitment to a purpose in life is often preceded by a process of exploration, and purpose exploration has received comparatively little attention from researchers. In the following chapters, I present three separate papers that examine purpose exploration in various ways. I begin with an investigation of purpose and identity exploration as they relate to adaptive psychological functioning and internalizing symptoms, and if these relationships depend on whether the exploration is ongoing or happened in the past. In the next paper, I test for differences in purpose exploration, in addition to other aspects of purpose, between college graduates, adults with some college experience, and those who never attended college. The final

paper examines gender as a social role that might shape the purpose development process, testing whether different purpose contents are perceived as gendered and if combinations of exploration and commitment have the same relationship to purpose contents for women and men.

### *Outcomes Associated with Purpose and Identity Exploration*

Both purpose and identity are thought to develop through processes of exploration and commitment, beginning during adolescence, and the development of one reinforces the development of the other (Blattner, Liang, Lund, & Spencer, 2013; Bronk, 2011; Burrow & Hill, 2011; Burrow, O'Dell, & Hill, 2010; Erikson, 1956; Hill & Burrow, 2012; Kiang & Fuligni, 2010; Klimstra, Hale, Raaijmakers, Branje, & Meeus, 2010; Luyckx, Klimstra, Duriez, Schwartz, & Vanhalst, 2012; Luyckx, & Robitschek, 2014; Meeus, Iedema, Helsen, & Vollebergh, 1999; Paradise & Kernis, 2002; Ritchie et al., 2013; Schwartz et al., 2011; Waterman et al., 2013). Previous research has found that ongoing identity exploration was associated with undesirable outcomes like depressive symptoms and anxiety, but having engaged in identity exploration in the past was associated with positive outcomes (Schwartz et al., 2009). In Chapter 2, I conduct a similar investigation using purpose exploration in addition to identity exploration. Understanding whether ongoing purpose exploration is associated with indicators of maladjustment, such as depression and anxiety, would be beneficial for people who work with adolescents and emerging adults, as these age groups may be most likely to engage in purpose exploration and could require additional support if engaging in exploration is related to these undesirable outcomes.

### *Purpose Development and Education Level*

The ideal time for engaging in self-exploration related to identity and purpose is emerging adulthood (ages 18-25; Arnett, 2000). For many emerging adults in America, this

phase of life includes attending and graduating from college. The college experience offers many opportunities for developing a purpose, such as community service and exposure to diverse ideas and groups of people (Bowman, Brandenberger, Hill, & Lapsley, 2011; Vogelgesang, & Astin, 2000), and almost half of college seniors mention purpose when talking about what they have learned during their time as students (Kuh, 1993). Much of the existing research on purpose has utilized college student samples, which, aside from raising concerns about the generalizability of findings gleaned from these studies (Peterson, 2001; Peterson & Merunka, 2014), leaves open the possibility that our understanding of purpose as a construct is somehow unique to individuals who go to college. In Chapter 3, I use a sample that includes college graduates in addition to adults with some college experience and those who never went to college, to investigate whether there are differences in purpose by education level. This study highlights the importance of considering an individual's life experiences, like attending college, and how they might facilitate purpose development, in addition to examining multiple facets of purpose: the strategy used to explore one's options for purpose, one's overall level of purpose, and the content of one's purpose.

### *Gender and Purpose Content*

Gender is a factor that might be expected to shape many facets of purpose development because gender roles shape the development of skills, behaviors, attitudes (Eagly, 1997; Eagly & Wood, 1991; Wood & Eagly, 2002), and people who internalize gender roles tend to endorse gender-stereotypic careers and long-term goals (Evans & Diekmann, 2009). Given the impact that gender roles can have on one's self-concept and goals, it is likely that gender roles also shape the content of one's purpose. There is very little research on purpose content, but the research that does exist focused on four broad orientations (categories of content) that seem aligned with

traditional gender roles: prosocial, creative, financial, and personal recognition (Hill, Burrow, Brandenberger, Lapsley, & Quaranto, 2010). In Chapter 4, I conduct two studies investigating whether people perceive these purpose orientations as being gendered, and whether there are actual gender differences in women's and men's purpose orientations. This work extends our understanding of how an individual's social role, in this case their gender, contours their choice of what purpose to pursue. I also conduct a cluster analysis, grouping participants by their levels of exploration and commitment, and test whether the relationship between cluster and orientation is the same for women and men.

By researching these characteristics and contexts that might affect purpose development, I address a few of the unanswered questions that exist in the purpose literature, especially those related to exploration and content. I hope that the papers presented here, which emphasize the importance of individuals' social roles and life experiences as they relate to purpose, can provide a foundation for future research that will yield a more comprehensive and generalizable understanding of purpose in life.

## CHAPTER 2

### The Perils of Exploring Identity and Purpose

#### **Abstract**

While there is an abundance of research on the benefits of having a sense of identity and purpose in life, the consequences of exploring one's options for identity and purpose are less well understood. In the present study, structural equation modeling was used to investigate the relationships between both ongoing and past exploration (in the domains of identity and purpose) and adaptive functioning and internalizing symptoms. Results indicated that ongoing purpose exploration was negatively related to adaptive functioning and positively related to internalizing symptoms, but past purpose exploration was not related to either outcome. Ongoing identity exploration was positively related to internalizing symptoms. These results are in line with existing work showing that engaging in self-exploration can be unsettling and anxiety-provoking, and implications for purpose development are discussed.

#### **Introduction**

Many experiences in life are worth doing, even if they are uncomfortable or anxiety-provoking when they occur. While meeting new people can be awkward at first, it can also be the start of a life-long friendship. Likewise, applying for jobs can be unsettling, as it might be unclear which position is best-suited to one's goals and skills, but it can lead to finding a career that is incredibly fulfilling. In some regards, exploring one's identity and purpose in life is a similar experience to meeting new people or applying to jobs: there is not always a clear solution as different options are considered, and although there will likely be uncomfortable moments during the exploration process, the discomfort will probably pass when the exploration process is over, and having explored one's options might yield outcomes that are more personally

satisfying.

Previous research on identity has found that ongoing exploration is related to internalizing symptoms such as anxiety and depression, but having explored in the past is related to positive outcomes like self-esteem, internal locus of control, and ego strength (Schwartz, Zamboanga, Weisskirch, & Rodriguez, 2009). Because identity and purpose are related aspects of the self (Bronk, 2011; Hill & Burrow, 2012), purpose exploration may exhibit similar relationships with internalizing and adaptive outcomes. Sometimes these related aspects of the self function differently from each other, however. For example, purpose commitment has been found to mediate the relationship between identity commitment and well-being, but identity commitment was a much less robust mediator of the relationship between purpose and well-being (Burrow & Hill, 2011). In another study, when identity and purpose variables were considered as simultaneous predictors of subjective well-being, purpose commitment was significantly related to positive affect, negative affect, and life satisfaction, while identity commitment was only related to life satisfaction (Sumner, Burrow, & Hill, 2015). In that same study, purpose and identity exploration were both associated with greater levels of negative affect and lower levels of life satisfaction, but purpose was a more robust predictor when both were considered together.

Previous research has found that adolescents who report high levels of both purpose exploration and purpose commitment have more agency and positive affect than those who report more exploration and less commitment (Burrow, O'Dell, & Hill, 2010), suggesting that there might be negative consequences associated with the process of exploring one's purpose. However, few differences emerge between adolescents who report high levels of commitment, regardless of their level of exploration (Blattner, Liang, Lund, & Spencer, 2013; Burrow et al.,

2010), suggesting that the experience of exploring one's options for purpose may not confer any additional benefits beyond those associated with purpose commitment. The aims of the current study are to attempt to replicate the Schwartz et al. (2009) finding with identity exploration, and to test whether purpose exploration exhibits a similar pattern of results with these outcomes.

### *Identity Exploration*

Erik Erikson's work is cited as the impetus for much of the identity research that has been conducted in recent decades. He described the process of searching for identity as a normative experience for adolescents, and for many American teens, adolescence is a time when they are able to explore their options for an identity while unconstrained by long-term commitments that characterize adulthood (Erikson, 1994). In the United States, these commitments are often delayed until after emerging adulthood (ages 18-25), and this period in particular has been described as the time in life that is best-suited for identity exploration (Arnett, 2000). Emerging adults likely have more control over their choices than they did during adolescence, but may have postponed making long-term commitments more common in adulthood, such as choosing a career or a spouse.

This issue of having to construct one's own identity is a decidedly modern problem. In centuries past, constructing a personal identity was less important because people's sense of meaning and direction was derived primarily from their occupation and religious faith (neither of which was perceived as being a choice)(Baumeister, 1987). In recent decades, however, traditional societal sources of meaning and self-definition have fallen away, leading to the primacy of individual identity. The freedom to define one's own identity can be experienced as a burden, especially when individuals are trying to form a unified identity from a number of disparate (and sometimes competing) domains (e.g., athlete, female, scientist, daughter, reader,

student)(Baumeister, 1986). Although the process of identity formation begins during adolescence, identity exploration can be a life-long process that is spurred by changes in one's roles or commitments (Baumeister, Shapiro, & Tice, 1985; Erikson, 1956; Grotevant, 1987).

Based on Erikson's writings about searching for and then committing to an identity, Marcia (1966, 1980) developed the identity status model, which defines four identity statuses based on differing levels of identity exploration and commitment. In this case, exploration entails "re-thinking, sorting through, and trying out various roles and life plans" (Kroger & Marcia, 2011, pg. 33) and commitment is "the degree of personal investment the individual expressed in a course of action or belief" (Kroger & Marcia, 2011, pg. 33-34). The two statuses characterized by high levels of identity commitment, achieved and foreclosed, tend to experience positive outcomes such as greater levels of self-esteem, life satisfaction, and psychological well-being (Meeus, Iedema, Helsen, & Vollebergh, 1999; Schwartz et al., 2011). People who report high levels of identity exploration tend to fare a bit worse, often experiencing lower levels of well-being and more engagement with hazardous and risky health behaviors (Meeus et al., 1999; Schwartz et al., 2011), although some studies find that exploration is positively correlated with both positive and negative outcomes (such as locus of control and depression) (Waterman et al., 2013).

Schwartz and his colleagues (2009) investigated how the timing of exploration affects its relationship to well-being. Asking participants about their level of current, ongoing identity exploration, and their level of past identity exploration, they found that ongoing identity exploration was negatively related to adaptive outcomes (purpose, self-esteem, internal locus of control) and positively related to maladaptive outcomes such as depression and anxiety. Having engaged in identity exploration in the past, however, was positively associated with adaptive

outcomes. This aligns with previous work demonstrating that exploring one's identity can be distressing and uncomfortable (Dunkel, 2000; Kidwell, Dunham, Bacho, Pastorino, & Portes, 1995; Ritchie et al., 2013), yet also showing that there are benefits associated with having engaged in the exploration process in the past. It remains unknown if a similar pattern for ongoing and past exploration exists in the domain of purpose in life.

### *Purpose Exploration*

Purpose in life is a facet of the self that is similar to identity, though the two are not synonymous. Whereas identity helps people understand who they are, purpose, or a “central, self-organizing life aim that organizes and stimulates goals, manages behaviors, and provides a sense of meaning” (McKnight & Kashdan, 2009, p. 242), helps people understand their life's direction. As with identity, purpose development occurs through processes of exploration and commitment. Researchers have used a model similar to Marcia's (1966, 1980) identity status model to examine outcomes associated with various levels of purpose exploration and commitment. Burrow, O'Dell, and Hill (2010) found statuses based on purpose exploration and commitment that resemble those commonly found in identity research. Those whose status was characterized by high levels of purpose commitment had the most adaptive profile of outcomes, including greater positive affect and agency. Similar statuses were also found by Blattner and colleagues (2013), which suggests that exploration and commitment are reliable metrics of purpose development.

There is an abundance of research demonstrating the benefits of committing to a purpose in life, including greater levels of self-esteem, life satisfaction, and positive affect, in addition to numerous physical health outcomes such as longevity (Blattner et al., 2013; Burrow & Hill, 2011; Hill & Turiano, 2014; Paradise & Kernis, 2002; Scheier et al., 2006). Having a sense of

purpose in life is also associated with lower levels of depression and negative affect (Pinquart, 2002; Sumner et al., 2015). Purpose exploration has received comparatively little attention from researchers, but the findings of existing work on identity exploration suggest that studying purpose exploration has the potential to greatly enhance our understanding of the purpose development process as a whole.

The existing research that has focused exclusively on purpose exploration investigated the strategies that individuals use when exploring their options for a purpose in life. Although there are likely many strategies that could be used to explore in this domain, Hill, Sumner, and Burrow (2014) concentrated on three theory-derived strategies: Proactive exploration, or actively seeking out opportunities to explore purpose; reactive exploration, which entails exploration of purpose following a transformative life event; and exploration via social learning, or modeling one's exploration of purpose after a role model or some other person. These pathways were differentially associated with personality and well-being, but it is unclear whether participants were currently engaged in that kind of exploration, or if they had engaged in that kind of exploration at some point. Because Schwartz and colleagues (2009) found that identity exploration's relationship to well-being depends on its timing – whether the exploration is ongoing or happened in the past – it is worth investigating whether the same temporal effects emerge with purpose exploration in order to better understand the consequences of engaging in exploration.

## **Method**

### *Participants and Procedure*

Participants ( $M_{\text{age}} = 20.82$ ,  $SD = 3.83$ ) were recruited at a selective university in the Northeast U.S. ( $N = 147$ ) and a public university in the province of Ottawa, Canada ( $N = 66$ ).

The sample was predominantly female (68.5%) and diverse in terms of race/ethnicity (6.6% African/African American/African Canadian, 30.5% Asian/Asian American/Asian Canadian, 54.5% Caucasian/White, 8.5% Hispanic/Latin American, 0.9% Middle Eastern, 3.3% Other)(participants were allowed to indicate more than one race/ethnicity). Participants were recruited for a 6-week study, and the data used in this study comes from their responses on the initial survey, which was administered online. All respondents were paid \$5 for completing the initial survey.

### *Measures*

*Purpose Exploration.* To assess ongoing purpose exploration, I administered the 5-item exploration subscale from the Youth Purpose Scale (Sample item: “I am seeking a purpose or mission for my life”; Bundick et al., 2006), in addition to six other items that were written for this study (e.g., “I question the direction I have chosen for my life” and “I currently pursue a lot of different goals so that I can find a purpose for my life”). Responses were anchored with 1 (*Strongly Disagree*) and 7 (*Strongly Agree*), and the reliability for the 11-item purpose exploration assessment was  $\alpha = .88$ . The same 11 items were adapted to assess past purpose exploration (“I have sought a purpose or mission for my life,” “In the past, I questioned the direction that I had chosen for my life,” “I used to pursue a lot of different goals so that I could find a purpose for my life”), and this scale also had adequate reliability ( $\alpha = .90$ ).

*Identity Exploration.* As in Schwartz et al. (2009), ongoing identity exploration was measured with the exploration subscale of the Ego Identity Process Questionnaire (EIPQ; Balistreri, Busch-Rossnagel, & Geisinger, 1995). This scale includes items such as “There are many different kinds of people. I’m still exploring the many possibilities to find the right kinds of friends for me” and it had adequate reliability ( $\alpha = .82$ ). Past purpose exploration was assessed

with the 16 items of the Extended Objective Measure of Ego Identity Status II's (EOM-EIS-II; Bennion & Adams, 1986) moratorium subscale, containing items such as "I have consistently re-examined many different values in order to find the ones which are best for me" ( $\alpha = .80$ ). Responses for both scales were anchored with 1 (*Strongly Disagree*) and 7 (*Strongly Agree*).

*Adaptive Psychological Functioning.* Self-esteem, life satisfaction, and internal locus of control were used as indicators of adaptive psychological functioning. Instructions for these measures asked participants to rate their level of agreement with each statement on a scale anchored with 1 (*Strongly Disagree*) and 7 (*Strongly Agree*). The Single-Item Self-Esteem Scale (SISE, Robins, Hendin, & Trzesniewski, 2001) was used to assess self-esteem, and it asks participants to indicate their agreement with the statement "I have high self-esteem". The 5-item Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) was used as a measure of life satisfaction ( $\alpha = .90$ ; Sample item: "In most ways my life is close to my ideal"). Finally, as in Schwartz et al. (2009), internal locus of control was measured using four items from an adaptation of Rotter's Locus of Control Scale (Côté, 1997) (Sample item: "When I make plans, I am almost certain that I can make them work",  $\alpha = .67$ ).

*Internalizing Symptoms.* Depression and anxiety were used as indicators of internalizing symptoms. Depression was measured with the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977), a 20-item scale that asks participants to indicate how often in the past seven days they have felt a number of emotions (e.g., lonely; I was bothered by things that usually don't bother me). Answers were provided on a scale from 1 (*None of the Time or Rarely*) to 4 (*Most or All of the Time*),  $\alpha = .91$ . Anxiety was measured with the 21-item Beck Anxiety Inventory (Beck, Epstein, Brown, & Steer, 1988), which also asks participants to indicate how much they have been bothered by a number of symptoms during the previous week (e.g.,

nervous, shaky). Responses were provided on a scale from 1 (*Not at All*) to 3 (*Severely – I could barely stand it*),  $\alpha = .91$ .

## Results

Bivariate correlations, means, and standard deviations of study variables are presented in Table 2.1.

Table 2.1. *Bivariate correlations, means, and standard deviations of study variables*

	1	2	3	4	5	6	7	8	9
1. Age	-								
2. Ongoing purpose exploration	-.067	-							
3. Past purpose exploration	.069	.484**	-						
4. Purpose in life	-.152*	-.350**	-.099	-					
5. Self-esteem	-.063	-.295**	-.157*	.521**	-				
6. Locus of control	-.008	-.230**	-.104	.299**	.190**	-			
7. Life satisfaction	-.245**	-.239**	-.056	.536**	.645**	.155*	-		
8. Depression	.092	.325**	.177*	-.617**	-.569**	-.210**	-.602**	-	
9. Anxiety	.014	.281**	.159*	-.441**	-.406**	-.125	-.305**	.682**	-
Mean	20.82	4.77	5.32	3.88	4.45	4.60	4.53	1.89	1.32
Standard deviation	3.83	1.06	0.96	0.72	1.76	1.06	1.37	0.52	0.32

\*. Correlation is significant at the 0.05 level (2-tailed).

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

Items for the scales with more than six items (ongoing purpose exploration, past purpose exploration, ongoing identity exploration, past identity exploration, anxiety, and depression) were parceled for inclusion in the structural equation model (SEM). Each scale's items were randomly assigned to parcel (within scale), and parcels were created by averaging the items in each parcel. This approach has some statistical advantages (e.g., increased parsimony)(see Little, Cunningham, Shahar, & Widaman, 2002 for a review). The life satisfaction, locus of control, and self-esteem, scales contained six or fewer items, so these items were treated as individual items

(instead of parcels) loading onto the latent factor for each scale. Using SAS 9.4, a confirmatory factor analysis revealed that each item or parcel significantly loaded onto its factor, suggesting that they are valid indicators of the factor.

Next, a SEM approach was used to model the relationships between ongoing and past exploration, in the domains of both identity and purpose, with adaptive functioning and internalizing symptoms. Latent variables were defined by the parcels of items or the individual scale items (as described above), and for each latent variable the coefficient for the highest loading observed variable was set to 1 for identifiability purposes.

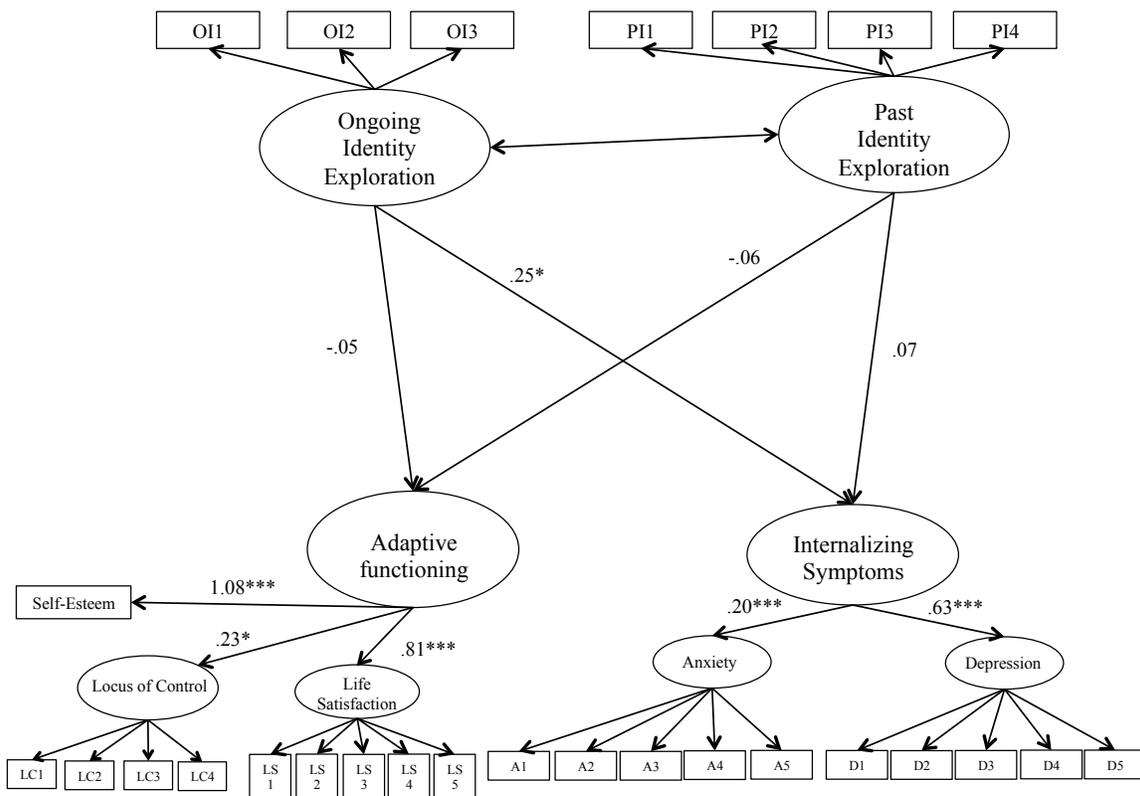


Figure 2.1. Model 1

In Model 1 (shown in Figure 2.1), paths were estimated between each of the identity

exploration latent variables (ongoing and past) and each of the outcome latent variables (adaptive functioning, internalizing symptoms). The exploration variables were allowed to correlate with each other. The model had adequate fit,  $X^2(313) = 595.74, p < .001$ , Comparative Fit Index (CFI) = .90, Root Mean Square Error of Approximation (RMSEA) = 0.069 (90% CI = 0.061, 0.077), Akaike Information Criterion (AIC) = 725.74. Generally, a CFI greater than .95 is desired for acceptance of model fit (Schreiber, Nora, Stage, Barlow, & King, 2006), but .90 is considered the minimum acceptable CFI (Schwartz et al., 2009), and RMSEA of less than .06 is desirable (<.06 to .08 with confidence interval; Schreiber et al., 2006). AIC is useful for comparing multiple models, and the model with a smaller AIC is preferable (Schreiber et al., 2006).

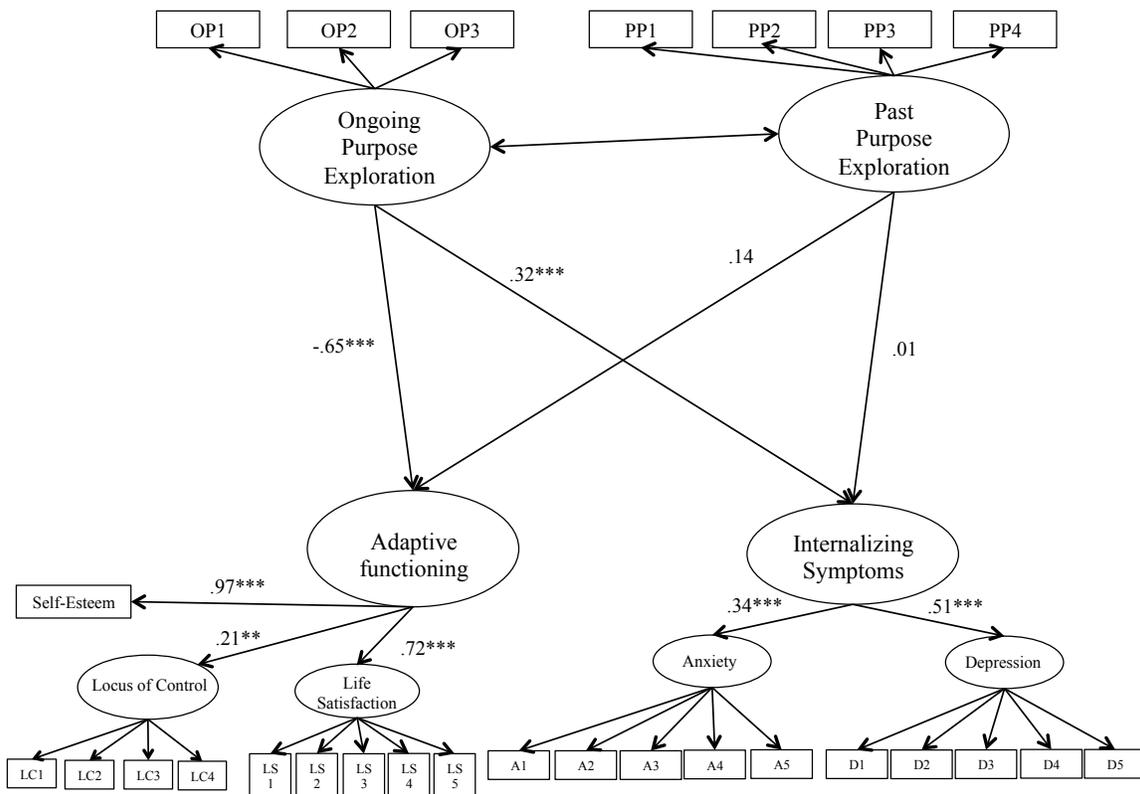


Figure 2.2. Model 2

In Model 2 (shown in Figure 2.2), paths were estimated between each of the purpose exploration latent variables (ongoing and past) and each of the outcome latent variables (adaptive functioning, internalizing symptoms). Again, the exploration variables were allowed to correlate with each other. This model also had adequate fit,  $X^2(288) = 520.76, p < .001, CFI = .92, RMSEA = 0.066$  (90% CI = 0.057, 0.074), AIC= 646.76.

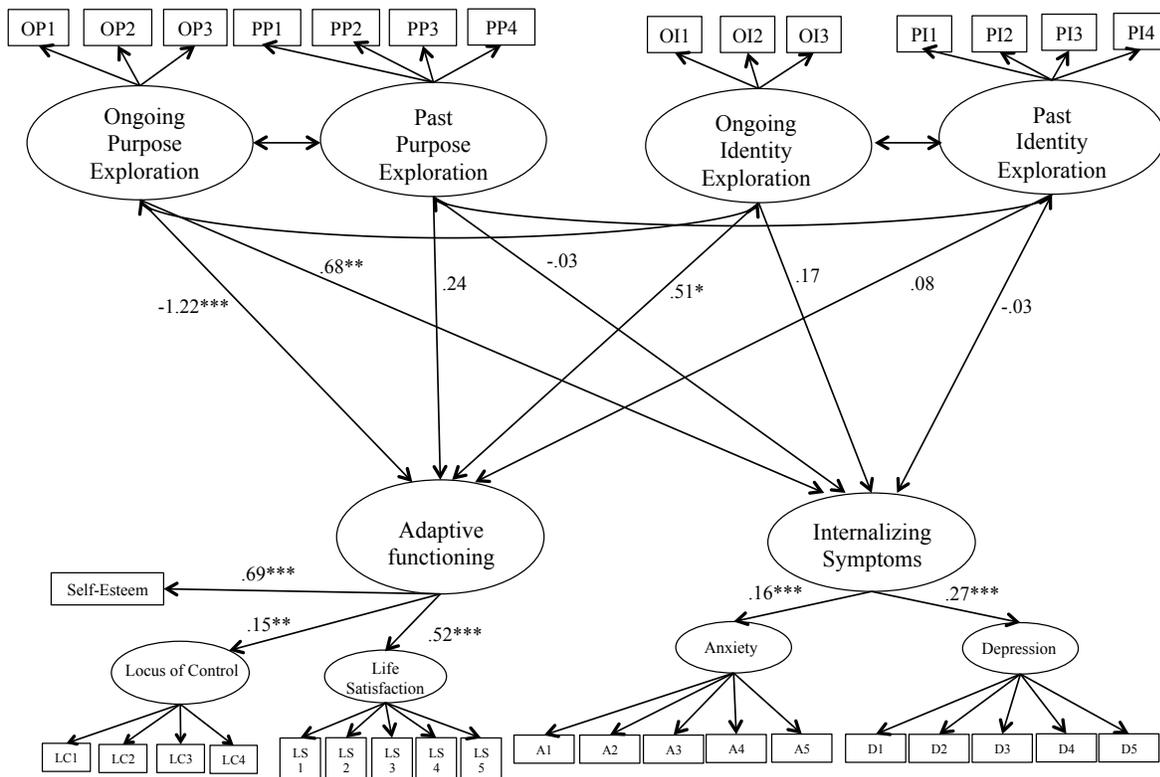


Figure 2.3. Model 3

Model 3 contained ongoing and past exploration for both identity and purpose (Figure 2.3) as predictors of the latent outcome variables. This model also had adequate fit,  $X^2(475) = 834.55, p < .001, CFI = .90, RMSEA = 0.063$  (90% CI = 0.057, 0.071), AIC= 1006.55, though its AIC is higher than Models 1 and 2, suggesting that those models are better representations of the data. As such, I will focus on the results from Models 1 and 2.

Regression weights from all three models are presented in Table 2.2. In Model 1, ongoing identity exploration was positively related to internalizing symptoms. This partially replicates Schwartz et al.'s (2009) work, which had also found that adaptive functioning was positively related to past exploration and negatively related to ongoing exploration. In Model 2, ongoing purpose exploration was negatively related to adaptive functioning and positively related to internalizing symptoms. Past purpose exploration was not significantly related to either adaptive functioning or internalizing symptoms.

Table 2.2. *Regression Weights from Structural Equation Models*

Predictor	<u>Adaptive Functioning</u>			<u>Internalizing Symptoms</u>		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
<b>Model 1 (DF = 123)</b>						
Ongoing Identity Exploration	-.05	.15	-.03	.25*	.12	.19
Past Identity Exploration	-.06	.14	-.04	.07	.08	.06
<b>Model 2 (DF = 125)</b>						
Ongoing Purpose Exploration	-.65***	.16	-.45	.32***	.09	.38
Past Purpose Exploration	.14	.16	.09	.007	.09	.007
<b>Model 3 (DF = 102)</b>						
Ongoing Identity Exploration	.51*	.26	.21	.17	.20	.08
Past Identity Exploration	.08	.25	.03	-.03	.20	-.02
Ongoing Purpose Exploration	-1.22***	.28	-.58	.68**	.21	.38
Past Purpose Exploration	.24	.25	.11	-.02	.21	-.02

*B* = unstandardized regression weight, *SE B* = standard error,  $\beta$  = standardized regression weight  
 \* =  $p < .05$ , \*\* =  $p < .01$ , \*\*\* =  $p < .001$

## Discussion

The SEMs tested here demonstrated that being in the midst of exploring one's options for purpose in life is associated with greater internalizing symptoms, in addition to lower levels of adaptive functioning. Model 1 also provided a partial replication of Schwartz et al.'s (2009) work, demonstrating a positive relationship between ongoing identity exploration and

internalizing symptoms.

It is worth noting that the current study and the Schwartz et al. (2009) study used college student participants, and these students are at an age and in a context that is particularly conducive to this kind of self-exploration (Arnett, 2000; Arnett, 2004; Chickering & Reisser, 1993; Dunkel, 2000). The fact that purpose and identity exploration are related to increased internalizing symptoms and decreased adaptive functioning even at the time of life that is ideal for exploring one's options in these domains suggests that adolescents or older adults who engage in exploration might be at greater risk of experiencing these negative consequences. The exploration process, which can involve considering many options for oneself and one's future, sometimes includes the consideration of negative options (Dunkel, 2000), which could understandably be related to anxiety and depressive symptoms. Other identity researchers have suggested that emerging adults who are exploring their options might experience anxiety related to the prospect about making long-term commitments, like committing to a career or starting a family, which is something that they have not yet had to do (Ritchie et al., 2013).

There was no evidence to suggest that past purpose exploration was related to either adaptive functioning or internalizing symptoms. This is a finding that differs from that of identity exploration, which exhibited a positive relationship to adaptive functioning in Schwartz et al.'s (2009) work (though not in the current study). In the current study, past purpose exploration was highly correlated with ongoing purpose exploration, and the experience of having explored one's options in the past might only be beneficial if it leads to commitment (not more exploration). There have been numerous studies investigating prolonged, ruminative exploration in the domain of identity (Luyckx et al., 2008a, Luyckx et al., 2013; Luyckx & Robitschek, 2014; Ritchie et al., 2013). Interestingly, college students are more likely than working emerging adults to score high

on ruminative exploration (Luyckx, Schwartz, Goossens, & Pollock, 2008b), possibly because there are so many different options and opportunities to explore in the college environment. The college student participants in the current study might be in the midst of a prolonged purpose exploration process, and any benefits associated with having explored various purposes might only emerge when their exploration process comes to an end.

In the current study, purpose exploration was assessed with items such as “I am seeking a purpose or mission for my life” (ongoing) and “I used to pursue a lot of different goals so that I could find a purpose for my life” (past). As described above, this ongoing exploration measure was negatively related to adaptive functioning and the past exploration measure showed no relationship to adaptive functioning. In another study that assessed specific strategies for exploring purpose, participants’ scores for each strategy were found to be positively associated with measures of well-being (positive affect, agency, and life satisfaction)(Hill et al., 2014). The scale used in that study asked participants to rate their agreement with items such as “I actively pursue new experiences, with the hope of finding new life goals to pursue” and “In searching for a direction, I mostly consider what those around me like to do.” It is interesting that purpose exploration assessed in broad terms has a relationship to well-being that is different from purpose exploration assessed in terms of specific behaviors.

Given the multitude of benefits associated with having a purpose in life, perhaps especially important for at-risk youth (Machell et al., 2015), purpose exploration and commitment should be encouraged. In a study of adolescents, Hill and Burrow (2012) found that participants who increased in their level of purpose exploration over time also tended to increase in their level of purpose commitment, suggesting that engaging in purpose exploration is an effective way to cultivate a sense of purpose. It is important to understand, however, that

emerging adults who are exploring their options for purpose and identity might experience increases in depressive symptoms and anxiety during the exploration process, and may therefore require additional social support. There is empirical evidence suggesting that this kind of social support can reduce the potential negative consequences resulting from purpose exploration. Blattner and colleagues (2013) found a negative relationship between purpose exploration and self-esteem in a sample of adolescent females, but this relationship was attenuated for participants who reported low levels of parental alienation.

The emotional impact of engaging in self-exploration is important not only because of its immediate effect on well-being, but also because affective reactions to the exploration process can affect future willingness to engage in exploration (Grotevant, 1987). For example, someone who has a particularly arduous exploration experience during emerging adulthood and loses a job later in adulthood may be unwilling to engage in a process of exploration that could help lead to finding another, perhaps more personally fulfilling, job.

#### *Limitations and Future Directions*

A limitation of the current research is its reliance on a convenience sample of college students. Findings from such samples can be difficult to replicate and they have limited generalizability (Peterson, 2001; Peterson & Merunka, 2014). A random sample of emerging adults – both college students and not – would be expected to yield more reliable, generalizable results. Additionally, a larger sample would have permitted SEMs to be constructed based on one half of the sample, and then tested on the other half of the sample; this can be used as demonstration of model reliability.

Like the Schwartz et al. (2009) paper, the current study focused exclusively on emerging adults. While they may be the most likely to engage in purpose and identity exploration, the

outcomes associated with ongoing and past exploration might be different in other age groups. Extending this research on the consequences of ongoing and past exploration to adolescents and adults would deepen our understanding of purpose exploration, and the affective reactions that it generates, throughout the lifespan.

Another limitation is that it is unclear when participants' past purpose exploration took place. The questions about past exploration began with phrases like "In the past...", "I used to...", or "I have...", so it is unclear what timeframe participants were thinking about. Future research that asks similar questions, but about specific time points, such as "Last year...", "Last month...", and "Last week..." would shed more light on the implications for exploring one's purpose in the distant past compared to the recent past. Because ongoing and past purpose exploration were highly correlated in the present study, it seems likely that participants were reporting on exploration that took place in the recent past.

Finally, there are many potential outcomes that might conceivably be related to purpose exploration, both ongoing and past, but were not assessed in the current study. Research on identity exploration has included outcomes such as agitation, unhappiness, and confusion about oneself (Kidwell et al., 1995; Schwartz et al., 2009), and including such outcomes in future research on purpose exploration would be beneficial. Specifically, some assessment of confusion related to one's purpose would be expected to mediate the relationship between ongoing purpose exploration and outcomes (both adaptive and maladaptive). While there are scales for measuring one's commitment to a purpose or overall sense of purpose, there is not yet a scale for assessing the extent to which one feels confused about what direction to pursue.

Even with these limitations, the research described here provides initial evidence that purpose exploration, like identity exploration, is associated with undesirable outcomes while it is

ongoing. Unlike identity exploration, however, no evidence emerged for a positive relationship between past purpose exploration and desirable outcomes. Future research could help clarify the reliability of this finding, and given that adolescents and emerging adults are often encouraged to explore their options for an identity and purpose, it is important for researchers to understand the benefits and pitfalls that may be associated with engaging in exploration and having explored in the past.

### *Looking Ahead to Chapter 3*

The study described here focused on purpose exploration as experienced by a sample of emerging adults who are in college. In the next chapter, I use an online sample of adults to test for differences in purpose exploration, content, and overall level by education. Specifically, I compare adults who graduated from high school but have no college experience to adults with some college experience and those who have graduated with a 4-year college degree. Much of the existing research on purpose utilizes college student samples, and attending college presents many opportunities for engaging with purpose. The study described in Chapter 3 addresses an important question: Are people who never go to college at a disadvantage when it comes to cultivating a sense of purpose in life?

## CHAPTER 3

### Going To College Is A Luxury, But Cultivating A Sense Of Purpose In Life Is Not

#### **Abstract**

There is an abundance of research demonstrating the benefits associated with having a sense of purpose in life, but much of this work utilizes academic (high school or college students) or well-educated adult samples. This study compares adults who graduated from college to adults with no or some college experience on a number of dimensions related to purpose development, including: the process of exploration (purpose pathway), overall level of purpose, and the content of one's purpose (purpose orientation). The relationship between purpose and psychological assets such as agency and subjective well-being is also compared across groups. Results demonstrated that there are no differences by education level with regard to overall level of purpose or one's purpose pathways, but education interacts with purpose to shape purpose orientation and purpose's relationships with agency and negative affect. For high school graduates, their level of purpose in life was unrelated to their score for personal recognition orientation. For college graduates, however, those who were relatively high in purpose in life had significantly higher personal recognition orientation scores than those who were relatively low in purpose. For both negative affect and agency, the gap between people who are relatively low and relatively high in purpose was greater among high school graduates than college graduates.

#### **Introduction**

There is consensus among researchers and laypersons that the experience of going to college is particularly conducive to cultivating a sense of purpose in life. Developing purpose is one of Chickering and Reisser's (1993) seven vectors of college student development, and they describe it as "an increasing ability to be intentional, to assess interests and options, to clarify

goals, to make plans, and to persist despite obstacles.” (p. 209). To the extent that students experience their time in college as a psychosocial moratorium, or a respite before long-term adult commitments are made (Arnett, 2000), it is an ideal time to explore options related to purpose and other domains such as identity, career, interpersonal relationships, and personal interests (Chickering & Reisser, 1993; Dunkel, 2000). Colleges and universities are uniquely positioned to support purpose development through a variety of means, like opportunities for students to study abroad, form connections to mentors on the faculty or staff, be exposed to new ideas through a broad curriculum, and meet people with different backgrounds and worldviews (Arnett, 2004; Chickering & Reisser, 1993; Pascarella, 2006). This potential for personal growth through finding oneself and one’s purpose in life during college is perceived by both graduating high school seniors who are about to start college (Karp, Holmstrom, & Gray, 1998) and college-age adults (ages 18-21) who have decided to forgo college for the time being (Lindholm, 2006).

Existing research on college student samples has found that there tends to be an increase in one’s sense of purpose across the college years (Foubert, Nixon, Sisson, & Barnes, 2005), but because Foubert and colleagues just looked at college students’ reported levels of purpose in life, it remains unclear if a similar increase in purpose over time is experienced by people who do not attend college. Are people who do not attend college at a disadvantage when it comes to cultivating a sense of purpose in life? Because so much of the existing work on purpose has utilized college student samples, our understanding of purpose in life may be specific to that of college students and graduates. Comparing college graduates to adults with less education provides an important test of the generalizability of existing findings related to purpose: finding no difference between college graduates and others would allow researchers to more confidently generalize existing findings from college student samples, and finding a difference between them

would help purpose researchers recognize the extent to which our understanding of purpose is unique to the experiences of college students and graduates.

In the research described here, I will compare adults with varying levels of education (high school graduate, some college, college graduate) on a number of dimensions related to purpose development: specifically, the strategies used for purpose exploration, one's overall level of purpose in life, and the content, or domain towards which one's purpose is oriented. While most research on purpose considers only one of these dimensions, I hope to provide a more thorough investigation of the experience of purpose by considering all three. I will also investigate whether purpose's relationship to agency and subjective well-being, relationships that have been established primarily with college student or educated samples, is the same among adults with some or no college experience. Attending college is an opportunity that not everyone can capitalize on, and this study is a first step towards understanding whether one's level of education shapes one's experience of purpose in life.

#### *College Attendance in the U.S.*

In recent decades, a “college for all” norm has characterized the aspirations of American students, their parents, and many of the individuals shaping education policy. Since 1980, the percentage of American 10<sup>th</sup> graders expecting to earn a bachelor's degree has almost doubled (from 43.4% to 84.5% in 2002; Goyette, 2008), and enrollment in college has also increased, with 42 percent of 18-24-year-olds enrolled in postsecondary education (Snyder & Dillow, 2013). While in college, students have access to a host of opportunities such as interacting with diverse groups of people, engaging with the community through service-learning courses, and studying abroad, and college graduates experience benefits in the form of higher salaries and lower unemployment than their high school graduate counterparts (Snyder & Dillow, 2013).

Even though college campuses are becoming more diverse in terms of students' age, gender, and race, incoming first-year students are also increasingly coming from wealthier households (Pryor, Hurtado, Saenz, Santos, & Korn, 2007), speaking to the fact that the "college for all" norm is an ideal, not a reality.

In addition to financial barriers, other reasons for not attending college include: feeling marginalized in academic settings, lack of motivation, preferring to work and make money, already having a good job, personal satisfaction, and needing to support oneself and one's family (Bozick & DeLuca, 2011; Blustein et al., 2002; Koyama, 2007; Lindholm, 2006). If they are working out of necessity, individuals who do not attend college may have less of a developmental moratorium during which to explore their options related to careers, hobbies, and personal relationships before making long-term commitments that characterize adulthood. Indeed, Luyckx and colleagues (2008) found that working emerging adults (none of whom had a postsecondary degree) had a greater sense of adulthood compared to their peers in college, who were more likely to be engaging in the kinds of self-exploration that is often associated with this age (e.g., Arnett, 2000; Erikson, 1956).

Adults who never attend college, the "forgotten half", are often underrepresented in psychological research. This fact garners attention from some scholars (e.g., Halperin, 1998), but it is an issue that should be of concern to all researchers because a reliance on college student samples can lead to inflated effect sizes or results that differ from community samples (Peterson, 2001). Additionally, there has been a call to broaden our understanding of the contexts and barriers that can affect individuals' development (e.g., Yoder, 2000), and the experience of developing a purpose outside of a high school or college context merits attention from researchers.

Because there is an abundance of research on the opportunities for developing purpose that are available to college students, it may be tempting to assume that individuals who do not attend college and therefore do not have access to those same opportunities are at a disadvantage when it comes to developing purpose in life. This assumption should be avoided, however, as no studies suggest that college attendance is a precondition for cultivating a sense of purpose in life. Additionally, if college graduates and those who never went to college do differ significantly in their overall levels of purpose, how they find a purpose, or the content of their purpose, then the generalizability of findings derived from college student samples would be called into question. This would suggest that research has been primarily examining purpose in life as experienced by college students and graduates, and not purpose in life as a general construct. Therefore, a comparison of purpose as experienced by college graduates and those with some or no college experience is important for the field going forward, and finding no difference between these groups would bolster the confidence with which existing findings from college student samples can be generalized.

### *Purpose in life*

Having a sense of purpose in life, or “a central, self-organizing life aim that organizes and stimulates goals, manages behaviors, and provides a sense of meaning” (McKnight & Kashdan, 2009, p. 242), is associated with numerous positive physical and psychological health outcomes. Subjective well-being, comprised of positive affect, negative affect, and life satisfaction (Deiner, 1984), is one outcome that is of particular interest to researchers in positive psychology (Ryan & Deci, 2001). Numerous studies have demonstrated a link between purpose in life and subjective well-being, showing that purposeful people tend to report greater levels of positive affect and life satisfaction, in addition to reporting lower levels of negative affect

(Burrow, Sumner, & Ong, 2014; Hill, Jackson, Roberts, Lapsley, & Brandenberger, 2011; Hope, Milyavskaya, Holding, & Koestner, 2013; Ryff & Keyes, 1995; Sumner, Burrow, & Hill, 2015). In order to better understand and facilitate well-being, it is important to investigate whether the well-documented relationship between purpose and subjective well-being exists regardless of one's education level.

Another beneficial psychological outcome associated with purpose is a sense of agency (Hill et al., 2011). Some researchers consider purpose to be a component of an agentic personality profile, which is associated with desirable outcomes related to identity development, such as exploration and flexible commitment (Côté, 1997; Schwartz, Côté, & Arnett, 2005). A sense of agency is characterized by goal-directedness, the use of active coping strategies, and persistence in the face of obstacles (Snyder et al., 1991). Because the college experience may be particularly conducive to developing skills related to goal selection and pursuit, it is worth investigating whether the relationship between agency and purpose is the same regardless of one's level of education.

There is some empirical evidence suggesting that developing a purpose is an integral part of the college experience for many students. In a study with college seniors, over 40% of participants mentioned a sense of purpose when describing what they learned during their time in college (Kuh, 1993), and a four-year longitudinal study of college students found significant increases in purpose across the four years (Foubert et al., 2005). Additional studies have demonstrated that college students tend to increasingly prioritize intrinsic (compared to extrinsic) goals throughout college (Sheldon, 2005), and that this shift is positively associated with both subjective and psychological well-being (of which purpose is one component) (Hope et al., 2013).

There is also evidence that these increases in intrinsic goal pursuit and subjective well-being may be due to the passage of time, and not necessarily the experience of going to college. In a sample of adults aged 17-82, Sheldon and Kasser (2001) found that age was positively associated with striving for intrinsic goals and subjective well-being. In a summary of their findings, they wrote “it appears that people tend to become happier over time when they succeed in adopting more intrinsically satisfying and psychosocially mature goals and when they also develop more self-determined motives for pursuing those goals” (p. 499). This shift towards more personally meaningful goals likely informs one’s life direction, and theoretically this shift could occur regardless of whether one attends college.

Because most of the research on purpose development has utilized college student samples, it remains unclear whether the increases in purpose over time are related to one’s time spent in college or simply the passage of time. In the present study, I will test whether individuals who have graduated from college report greater levels of purpose in life compared to those who never attended or graduated from college; if college graduates are more purposeful, it will suggest that college experience provides a unique benefit for purpose cultivation. If, however, there is no difference in the level of purpose, it will suggest that individuals who do not attend college are not necessarily at a disadvantage regarding their ability to cultivate a sense of purpose in life. Given purpose’s link to important outcomes such as agency and subjective well-being, I will also test whether the relationships between purpose and these outcomes differ based on one’s education level.

### *Purpose Exploration*

College has been described as an ideal context for exploring one’s purpose in life, and for most students their time in college occurs during emerging adulthood (ages 18-25), which has

been described as the phase of life best suited to this kind of self-exploration. Emerging adulthood is especially conducive to exploration because many individuals can make choices related to their personal, vocational, and recreational activities, but these choices are usually not yet constrained by long-term commitments that characterize adulthood (Arnett, 2000; Chickering & Reisser, 1993; Dunkel, 2000). Being in college may increase the options one has to choose from when exploring purpose, but emerging adulthood can function as a psychosocial moratorium, or “prolongation of the interval between youth and adulthood” (Erikson, 1956, p. 59), regardless of whether one attends college.

Researchers have recently investigated the extent to which purpose development can be characterized by processes of exploration and commitment, an approach based on Marcia’s (1966, 1980) identity status model. Work by Burrow, O’Dell, and Hill (2010) demonstrated that individuals can be classified into one of four statuses based on their levels of purpose commitment and exploration, and that these statuses have associations with well-being that are similar to those found in identity research. For example, those who report high levels of commitment and low levels of exploration have more positive affect and agency than those reporting low commitment and high exploration. In another study that examined the relationships between purpose exploration and facets of subjective well-being, purpose exploration was negatively related to life satisfaction and positively related to negative affect in a sample of emerging adults (Sumner et al., 2015). These findings are in line with other work demonstrating that this kind of self-exploration can be stressful and unsettling while it is ongoing, but having explored one’s options in the past is positively associated with well-being (Schwartz, Zamboanga, Weisskirch, & Rodriguez, 2009).

While there are many strategies one can use to explore options for a purpose, researchers

have focused primarily on three strategies, or pathways: proactive exploration, reactive exploration, and exploration via social learning (Hill, Sumner, & Burrow, 2014; McKnight & Kashdan, 2009). Proactive exploration entails actively seeking out different kinds of experiences that can inform one's decision about choosing a direction for one's life. Reactive exploration is characterized by a transformative life experience that sets one on a particular purpose in life. The third and final pathway, social learning, involves identifying and observing purposeful others, and perhaps adapting one's own behavior to more closely resemble that of the purposeful other(s). In studies utilizing college students and an online sample (90% of whom had at least some postsecondary education), Hill and colleagues (2014) developed and validated the Pathways to Purpose scale, which measures the extent to which individuals use proactive, reactive, and social learning exploration when considering their options for purpose in life.

I will test for differences in the pathways used by high school graduates, adults with some college, and college graduates. Because college can facilitate proactive exploration through the breadth of opportunities readily available to students, reactive exploration because of its potential to provide transformative life events (such as studying abroad or taking a particularly engaging course), and exploration via social learning by providing a number of possible purpose role models, I hypothesize that college graduates will have higher scores on each of the three purpose pathways.

### *Purpose Orientations*

Although there are myriad options for the content of a purpose in life, four purpose orientations in particular have received attention from researchers: prosocial orientation, which entails helping others and influencing existing social structures; financial orientation, in which individuals focus on goals related to achieving in financial and administrative domains; creative

orientation, characterized by a desire to create original and/or artistic work; and a personal recognition orientation, involving the pursuit of recognition from one's colleagues (Hill, Burrow, Brandenberger, Lapsley, & Quaranto, 2010). This work relied on a sample of college students, some of whom were studied over time, and it would be valuable to examine the prevalence of these orientations in a sample of adults with some or no college experience.

Might the experience of going to college affect which purpose orientation someone adopts? It seems that individuals with a financial purpose orientation might be more likely to see college experience as an integral part of their purpose. First-year college students consistently report that "getting a better job" is one of their main reasons for attending college (Pryor et al., 2007), and colleges themselves have increasingly been focusing their marketing on their ability to enhance employment-related skills (Judson & Taylor, 2014). Indeed, students and colleges alike are correct about the important role that a college degree plays in one's vocational success: In 2011, the unemployment rate for high school graduates was approximately twice as high (11%) as the rate for college graduates (5%), and workers who have a bachelor's degree earned 64% more than their counterparts who had just a high school diploma (Snyder & Dillow, 2013). Based on these findings, I hypothesize that college graduates will score highest on a measure of financial purpose orientation.

There is comparatively little research related to the personal recognition orientation, but one study found that only 37% of college seniors rated social recognition as "very important" or "essential" when thinking about the kind of career they want (Higher Education Research Institute (HERI), 2013). This suggests that personal recognition is not a high priority for most college students, but it remains unclear whether it is more or less important for individuals who do not go to college. Therefore, I make no hypothesis about the potential difference (and its

direction) in personal recognition orientation scores.

More so than personal recognition, creativity and its relationship to the college experience has been of interest to researchers. Specifically, it has been suggested that measures of creativity be incorporated into the college admissions process as a way to increase the diversity of student bodies (see Kaufman, 2010, for a review). Creativity has been found to correlate negatively with common components of college admissions materials (the SAT and ACT; Blake, McCarthy, & Krause, 2014), but middle and high school students who see themselves as higher in creative ability (creative self-efficacy) are more likely to plan to go to college than their peers with low creative self-efficacy (Beghetto, 2006). Finally, perceptions of one's own creative ability are also related to social class: middle class students have higher creative self-efficacy than working class students (Ivcevic & Kaufman, 2013). There are many aspects of creativity, and the creative purpose orientation is focused primarily on generating new or original artistic works, whereas the research described above focused more on aspects such as imagination or problem-solving. As such, I will not make a hypothesis about the potential for a difference in creative purpose orientation based on college experience.

The final orientation, prosocial, is consistently associated with college experience. From the time they begin college to the time the graduate, students typically report an increase in the personal importance of items related to prosocial orientation (HERI, 2013). Almost half (46.5%) of college students report participating in community service, and 29.9% engage in service-learning during their college years (Vogelgesang & Astin, 2000); this involvement continues after graduation, with college graduates much more likely to volunteer than people with no college experience (Brand, 2010; The Center for Information and Research on Civic Learning and Engagement, 2007). In addition to service opportunities, exposure to diversity programming

(such as courses or workshops) and interacting with peers from different backgrounds also facilitates increases in prosocial orientation for college students (Laird, 2005). While students may demonstrate increases in prosocial orientation during their years in college, there is other evidence to suggest that this increase in prosociality tends to occur as individuals age. Striving for intrinsic goals is positively associated with age (Sheldon & Kasser, 2001), and self-reported prosociality is correlated across time for individuals who do and do not go to college (Eisenberg et al., 2002). Given the abundance of service opportunities available to college students and the higher rates of volunteerism among college graduates, I hypothesize that adults who graduated from college will have higher prosocial purpose orientation scores than those with no or some college experience.

### *The Current Study*

In the research presented here, I address the following research questions: (1): Is there a difference between college graduates, adults with some college experience, and high school graduates in their overall level of purpose in life? I hypothesize that there will be no difference. (2): Is there a difference by education level in the extent to which people rely on proactive, reactive, or social learning pathways? I hypothesize that college graduates will score the highest on all three pathways. (3): Is education level associated with differences in purpose orientations? I expect that college graduates will have higher financial and prosocial orientation scores, and I make no hypothesis about differences in personal recognition or creative orientations. (4): Do purpose's associations with agency and subjective well-being differ based on one's education level?

Answering these questions will contribute to the existing literature on purpose in life, much of which focuses on the experience of educated individuals or people in academic settings

(high school or college students). Since purpose is related to a host of desirable psychological and physical health outcomes, it is important to understand whether the well-documented benefits of purposeful living are most readily available to individuals who have the luxury of graduating from college. Finally, considering multiple facets of purpose development, including exploration, overall level, and content, provides an unusually comprehensive view of the experience of purpose.

## **Method**

### *Participants and Procedure*

Participants were recruited through Amazon.com's Mechanical Turk (MTurk) site, where individuals can find and participate in online tasks for payment. MTurk samples tend to resemble community samples in terms of demographics (age, race, gender), though they are generally older and more educated than college student samples (Goodman, Cryder, & Cheema, 2013; more information about the pros and cons of using MTurk can be found in Paolacci & Chandler, 2014). Participants in this study were paid \$0.50. As recommended by Goodman et al. (2013), there were attention-check items in the survey (e.g., "Please check "Strongly Disagree" for this item") to ensure that participants were paying attention. 795 adults completed the survey, but 130 of them incorrectly answered more than one of the eight attention-check items so they were excluded from analyses. Excluding participants who incorrectly answer attention-check questions is common in research using MTurk participants (Meyer, Cimpian, & Leslie, 2015; Oppenheimer, Meyvis, & Davidenko, 2009; Peer, Vosgerau, & Acquisti, 2014).

As part of the demographics form, participants were asked to indicate the highest level of education they have completed. The following analyses include only participants whose highest level of education was high school/GED ( $N = 73$ ), some college ( $N = 198$ ), and those who

completed a 4-year college degree ( $N = 240$ ). Demographic information for the sample of high school graduates, those with some college, and college graduates is presented in Table 3.1.

Table 3.1. *Demographic Characteristics of Samples*

Variable	Overall sample ( $N = 511$ )	High School Graduates ( $N = 73$ )	Some College ( $N = 198$ )	College ( $N = 240$ )
Age ( $M, SD$ )	34.85 (13.40)	35.78 (15.10)	33.67 (13.99)	34.54 (12.30)
Gender (%)	58.9	63.0	58.1	58.3
African	9.9	11.0	13.6	6.7
Asian	7.6	4.1	5.1	10.8
Latino	3.9	0.0	3.5	5.4
Native	2.1	5.5	0.5	2.5
White	79.6	86.3	78.3	78.8
Unemployed	22.5	23.3	25.3	20.0
Salary = < \$20k	24.6	37.0	33.3	13.8
Salary = \$21k-	27.0	24.7	28.3	26.7
Salary = \$41k-	15.7	12.3	8.1	22.9
Salary = \$61k-	5.6	1.4	3.5	8.8
Salary = \$81k-	2.7	1.4	.5	5.0
Salary > \$101k	1.3	0.0	.5	2.5

Values are percentages; participants were allowed to select more than one option for race/ethnicity

Participants whose highest level of education was high school/GED were asked to indicate which of the following options explain why they did not attend college: Could not afford to pay for college (40%), did not want to go to college (27%), just finished high school/GED (23%), felt like I had to work instead of going to college (22%), plan on going to college in the

future (11%), did not think I needed to go to college (10%), needed to support my family (10%), applied to college but did not get accepted (0%), and other (18%). Percentages sum to more than 100 because participants were allowed to check multiple options.

Those with some college or a 4-year college degree were asked to indicate which of the following options explain why they did attend college: I wanted to go to college (56% some college, 66% college graduates), I thought I needed to go to college (53%, 53%), my family encouraged me to go to college (46%, 51%), I felt like I needed a college degree to get the kind of job I want (54%, 64%), I wanted to make more money in the future (53%, 55%), I needed a college education to support my family (16%, 17%), I wanted to learn more (48%, 49%), I wanted to meet new people (24%, 28%), and other (4%, 2%). Again, percentages across variables sum to more than 100 because participants were allowed to check multiple options.

### *Measures*

*Purpose.* The Life Engagement Test was used to measure purpose in life (Scheier et al., 2006). This 6-item scale asks participants to indicate their level of agreement with statements such as “There is not enough purpose in my life” (reverse-scored) and “I have lots of reasons for living.” Ratings were given on a scale anchored with 1 (*Strongly Disagree*) and 5 (*Strongly Agree*), and  $\alpha = .88$ .

*Purpose Pathways.* The Pathways to Purpose Scale was administered in order to gauge which strategy or strategies participants used when exploring their options for purpose in life (Hill et al., 2014). This 12-item measure has a subscale for each of three exploration pathways: proactive (5 items, sample item: “I actively pursue new experiences, with the hope of finding new life goals to pursue”,  $\alpha = .76$ ); reactive (4 items, sample item: “My direction in life was spurred by a very memorable experience,”  $\alpha = .84$ ); and social learning (3 items, sample item:

“In searching for a direction, I mostly like to consider what those around me do,”  $\alpha = .78$ ).

Participants indicated their level of agreement with each statement on a scale from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*).

*Purpose Orientations.* To assess the content of participants’ purpose, they completed a 15-item measure of purpose orientations (Hill et al., 2010). Participants indicate how personally important each item is to them on a scale anchored with 1 (*Not At All Important*) and 4 (*Essential*). The four orientations assessed with this measure are: prosocial (6 items, sample item: “Helping others who are in difficulty,”  $\alpha = .83$ ); financial (3 items, sample item: “Being successful in a business of my own,”  $\alpha = .65$ ); creative (3 items, sample item: “Creating artistic work (painting, sculpture, decorating, etc.),”  $\alpha = .79$ ); and personal recognition (3 items, sample item: “Becoming an authority in my field,”  $\alpha = .73$ ).

*Subjective Well-Being.* The 5-item Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) was used to measure life satisfaction. Participants rated their agreement with each statement on a scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*) ( $\alpha = .91$ ; Sample item: “In most ways my life is close to my ideal”). The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) was used to measure positive and negative affect. Participants were asked to indicate in general how much they feel each of 20 different emotions (10 positive, e.g., Attentive,  $\alpha = .90$ ; 10 negative, e.g., Upset,  $\alpha = .92$ ). Responses were given on a scale that ranged from 1 (*Not At All*) to 5 (*Extremely*).

*Agency.* The agency subscale of Snyder et al.’s (1991) Hope Scale was used to measure participants’ sense of their goal-directedness and success in achieving goals. This 4-item subscale asks participants to rate how accurately statements such as “I energetically pursue my goals” describe them on a scale from 1 (*Definitely False*) to 4 (*Definitely True*) ( $\alpha = .81$ ).

## Results

Correlations, means, and standard deviations of study variables are presented in Table 3.2. As expected, purpose was positively correlated with life satisfaction, positive affect, and agency, and negatively correlated with negative affect. Purpose was not significantly correlated with college experience, gender, race, or salary, though there was a significant positive correlation between purpose and age.

### *Differences in Level of Purpose*

A univariate ANOVA was conducted to test for differences in level of purpose reported by high school graduates, those with some college, and college graduates. Age, race (0 = Non-White, 1 = White), gender (0 = male, 1 = female), and salary were included as covariates, with education level as the independent variable and LET score as the dependent variable. There were no significant differences in the mean level of purpose reported by high school graduates ( $M = 3.86$ ,  $SD = .10$ , 95% CI: 3.67, 4.05), people with some college experience ( $M = 3.88$ ,  $SD = .06$ , 95% CI: 3.76, 3.99), and college graduates ( $M = 3.74$ ,  $SD = .06$ , 95% CI: 3.63, 3.85),  $F(2, 489) = 1.54$ ,  $p = .215$ . As hypothesized, participants reported similar overall levels of purpose in life regardless of their education level.

### *Differences in Purpose Pathways*

To investigate whether education level predicts purpose pathways scores, a one-way multivariate analysis of covariance (MANCOVA) was conducted. The same demographic

Table 3.2 Pearson Correlations, Means, and Standard Deviations of Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Age	-															
2. Gender	.019	-														
3. Race	.144**	.025	-													
4. Salary	.054	-.216**	-.019	-												
5. Purpose (LET)	.137**	.058	-.041	.020	-											
6. Proactive pathway	-.084	.039	-.099*	.058	.389**	-										
7. Reactive pathway	.125**	-.034	-.055	.056	.374**	.196**	-									
8. Social learning pathway	-.165**	-.028	-.131**	.107*	.051	.307**	-.018	-								
9. Prosocial orientation	-.123**	.091*	-.159**	.054	.290**	.461**	.249**	.199**	-							
10. Financial orientation	-.160**	-.094*	-.182**	.136**	.148**	.277**	.102*	.323**	.274**	-						
11. Creative orientation	-.195**	.092*	-.054	-.028	.082	.251**	.073	.103*	.348**	.149**	-					
12. Personal recognition orientation	-.315**	-.136**	-.124**	.099*	.095*	.343**	.061	.302**	.346**	.491**	.348**	-				
13. Life satisfaction	.052	.085	.042	.113*	.536**	.176**	.193**	.135**	.196**	.082	.009	.040	-			
14. Positive affect	.093*	-.062	-.049	.111*	.538**	.468**	.234**	.074	.309**	.240**	.091*	.305**	.391**	-		
15. Negative affect	-.299**	-.013	-.009	-.072	-.432**	-.143**	-.116**	.014	.000	-.003	.116**	.069	-.406**	-.233**	-	
16. Agency	.031	-.019	-.020	.079	.660**	.450**	.239**	.106*	.268**	.180**	.100*	.239**	.598**	.594**	-.375**	-
17. Education level	.020	-.024	-.057	.246**	-.048	.017	.024	.050	.055	.033	-.016	.149**	.026	.047	.001	.090*
Mean	34.85	.59	.77	1.71	3.81	5.18	3.91	3.66	2.48	2.12	2.09	2.19	3.18	3.43	1.79	2.92
Standard Deviation	13.40	.49	.42	1.39	.83	.94	1.49	1.36	.66	.82	.88	.78	1.03	.78	.78	.59

\*. Correlation is significant at the 0.05 level (2-tailed).

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

Gender (0 = male, 1 = female); Race (0 = non=White, 1 = White); Education level (1 = high school graduate, 2 = some college, 3 = college graduate)

covariates used in the previous analyses were included in this MANCOVA, with education level included as an independent variable predicting the three purpose pathways. Based on Pillai's trace, education level was not significantly related to purpose pathway scores,  $F(6, 986) = 0.88$ ,  $p = .51$ . This is contrary to my hypothesis that college graduates would have higher scores on each pathway.

To examine whether overall level of purpose interacts with education to predict pathway scores, I re-ran the analysis described above with LET score and its interaction with education level also included as independent variables. Based on Pillai's Trace, LET score was the only variable of interest that had an effect on participants' purpose pathways scores,  $F(72, 1284) = 2.95$ ,  $p < .001$ . Follow-up ANOVAs demonstrate the significant positive effect of LET score on proactive pathway,  $F(24, 428) = 3.49$ ,  $p < .001$ , reactive pathway,  $F(24, 428) = 5.58$ ,  $p < .001$ , and social learning pathway scores,  $F(24, 428) = 3.44$ ,  $p = .003$ . Contrary to my hypothesis, neither education level nor its interaction with LET score was significantly related to any of the pathways scores, suggesting that one's experience with college does not affect the strategy used for exploring one's purpose in life.

#### *Differences in Purpose Orientations*

A similar set of analyses was conducted to test for differences in purpose orientation. The four purpose orientations were included as dependent variables, with the same independent variables and covariates used in the previous MANCOVAs.

When education level was the only independent variable, Pillai's trace revealed a significant multivariate effect of it,  $F(8, 970) = 2.97$ ,  $p = .003$ . Follow-up univariate tests showed significant effects for education level in both prosocial,  $F(2, 487) = 3.74$ ,  $p = .02$ , and personal recognition orientations,  $F(2, 487) = 5.33$ ,  $p = .005$ . Pairwise comparisons (with a Bonferroni

correction) revealed that high school graduates have significantly lower prosocial orientation scores than adults with some college experience ( $M = 2.33$ ,  $M = 2.56$ , respectively,  $p = .027$ ), and significantly lower personal recognition scores than college graduates ( $M = 1.97$ ,  $M = 2.29$ , respectively,  $p = .005$ ).

When LET score and its interaction with education were included as independent variables, however, the effect of education level on orientation scores was no longer significant. Here, LET score emerged as the only significant independent variable in the multivariate test (Pillai's Trace:  $F(96, 1684) = 1.39$ ,  $p = .009$ ). Follow-up univariate tests revealed that LET score was significantly related to prosocial orientation,  $F(24, 421) = 2.90$ ,  $p < .001$ , and financial orientation,  $F(24, 421) = 1.55$ ,  $p = .049$ .

In the follow-up univariate tests, the interaction between LET score and education level was also significantly related to personal recognition orientation,  $F(24, 421) = 1.50$ ,  $p = .037$ . Among high school graduates, there was no significant difference in the personal recognition scores of those who are high in purpose (1SD or above the mean) ( $M = 2.29$ ,  $SD = 1.13$ ) and those with a low level of purpose (1SD or below the mean) ( $M = 2.25$ ,  $SD = 1.10$ ),  $t(22) = .06$ ,  $p = .95$ . College graduates with a high level of purpose reported significantly more personal recognition orientation ( $M = 2.62$ ,  $SD = .77$ ) than their peers with a low level of purpose in life ( $M = 2.08$ ,  $SD = .78$ ),  $t(71) = 2.96$ ,  $p = .004$ .

#### *Purpose's Relationship to SWB and Agency by College Experience*

Because purpose and education can both be related to subjective well-being and agency, I investigated whether the interaction between purpose and education level is related to different levels of these outcomes. The three components of subjective well-being (positive affect, negative affect, life satisfaction) were entered as dependent variables in a MANCOVA. The

same independent variables (education level, LET score, and their interaction) and covariates described above were also used in this analysis.

Based on Pillai's Trace, purpose was significantly related to the subjective well-being outcomes,  $F(72, 1293) = 4.29, p < .001$ , as was the interaction between purpose and education level,  $F(102, 1293) = 1.26, p = .05$ . Follow-up univariate tests demonstrated that purpose was significantly related to positive affect,  $F(24, 431) = 7.98, p < .001$ , negative affect,  $F(24, 431) = 4.48, p < .001$ , and life satisfaction,  $F(24, 431) = 7.94, p < .001$ . The interaction between purpose and education level was significantly related only to negative affect,  $F(34, 431) = 1.50, p = .04$ . For both high school and college graduates, those with a high level of purpose in life reported significantly less negative affect than those with a low level of purpose; this difference was greater among high school graduates ( $M = 2.31, SD = .70$  and  $M = 1.25, SD = .26; t(9.31) = -4.41, p = .002$ ) than college graduates ( $M = 2.44, SD = 1.01$  and  $M = 1.53, SD = .54; t(52.86) = -4.79, p < .001$ ).

Finally, a univariate ANOVA was conducted to test whether the interaction between purpose in life and education level is related to agency. There was a main effect of purpose on agency,  $F(24, 431) = 15.14, p < .001$ , but this was qualified by its significant interaction with education level,  $F(34, 431) = 1.59, p = .02$ . Participants who were high in purpose reported greater levels of agency than those who were low in purpose, but the difference was greater among high school graduates ( $M = 3.17, SD = .41$  and  $M = 1.78, SD = .63; t(22) = 3.31, p < .001$ ) compared to college graduates ( $M = 3.43, SD = .37$  and  $M = 2.33, SD = .56; t(60.44) = 5.23, p < .001$ ).

## Discussion

This study sought to extend the existing literature on purpose by comparing adults with varying levels of education. Overall, the findings suggest that adults who do not attend or graduate from college are not at a disadvantage when it comes to cultivating a sense of purpose in life, and that there are only a few aspects of their experience with purpose that differ from the experience of college graduates.

As hypothesized, education level was not related to one's overall level of purpose in life: there were no significant differences in purpose between participants whose highest level of education was high school/GED, some college, or a 4-year college degree. While college is seen as an ideal opportunity for cultivating one's sense of purpose, both by students and scholars (Chickering & Reisser, 1993; Karp et al., 1998), the current findings suggest that people who do not attend or graduate from college are equally capable of identifying a purpose. This result should bolster the confidence of purpose researchers regarding the generalizability of their findings to non-college adult samples. That being said, both of the samples used in the current were self-selecting and, therefore, future research with random samples would do more to support the generalizability of purpose research.

When considering the strategies used for purpose exploration, a process that can precede purpose commitment, education level was not related to participants' use of any of the three pathways examined in this study. This result is contrary to my hypothesis and somewhat surprising because the college experience offers many opportunities for purpose exploration, such as taking classes, joining student groups, participating in community service or studying abroad, in addition to providing many students with a psychosocial moratorium during which to explore their options for a life's purpose. Adults who work instead of going to college often have

less time to engage in the kinds of self-exploration that are normative during a developmental psychosocial moratorium (Luyckx et al., 2008), yet the results of this study suggest that they are just as likely as their peers with some college experience or a four-year college degree to use proactive, reactive, and social learning strategies when exploring their options related to purpose.

Another facet of purpose in life, the domain in which one is striving, was contoured by individuals' experience with college. When controlling for overall level of purpose, education level had no effect on prosocial, creative, or financial purpose orientations; however, it did interact with purpose to shape the endorsement of a personal recognition orientation. For high school graduates, their level of purpose in life was unrelated to their score for personal recognition orientation. For college graduates, however, those who were relatively high in purpose in life had significantly higher personal recognition orientation scores than those who were relatively low in purpose. This finding may be due, at least in part, to the specific items used to assess personal recognition orientation. These items were taken from a survey given to college students by the Higher Education Research Institute (HERI), and they ask specifically about the personal importance of things like making a theoretical contribution to science or becoming an authority in one's field; these strivings might be more relevant for college graduates than high school graduates, and perhaps this explains why purpose is related to personal recognition orientation for them, but not their peers who did not attend college.

Finally, purpose is consistently associated with low levels of negative affect and high levels of agency (Burrow, Sumner, & Ong, 2014; Hill et al., 2011; Hope et al., 2013; Ryff & Keyes, 1995; Sumner, et al., 2015), but I found that these relationships were affected by education level. For both negative affect and agency, the gap between people who are relatively low and relatively high in purpose was greater among high school graduates than college

graduates. This finding suggests that something about the experience of attending and graduating from college makes people more similar in terms of their levels of negative affect and agency, regardless of their level of purpose in life. It also underscores the need to study purpose as experienced by different populations, since its relationship to important outcome variables may be contingent upon individual characteristics such as education level.

### *Limitations and Future Directions*

The focus of this research has been on potential differences between groups, but there is also variety within groups that merits consideration. College graduates were considered as one group, even though they might have had very different college experiences (e.g., attending a small liberal arts college compared to a large university). A sense of direction (or lack thereof) likely shapes a student's experience in college, which may be demonstrated in the breadth or depth of their coursework and extracurricular activities, or whether they switch majors during their years in school. Having a sense of purpose would also be expected to shape the experiences of adults who do not go to college, perhaps through their choice of job or the opportunities they seize both in and out of the workplace. Understanding the kinds and number of purpose-related opportunities available in academic and employment contexts, in addition to understanding how and why individuals take advantage of these opportunities, are important issues for future research. For example, the experience of attending college is often associated with increased exposure to diversity of people and ideas (Pascarella, 2006), and these experiences with diversity can help students cultivate a sense of purpose in life (Bowman, Brandenberger, Hill, & Lapsley, 2011). Research with non-college student samples has also found a positive relationship between purpose and comfort with diversity (Burrow et al., 2014), but it is unclear whether college students and non-college adults differ in their exposure to diversity, and investigating the within-

and between-group differences related to quantity and type of diversity experiences is a good idea.

Researchers could also examine other positive psychological and physical health outcomes associated with purpose, such as longevity and better adjustment in the face of perceived changes (Boyle, Barnes, Buchman, & Bennett, 2009; Burrow, Stanley, Sumner, & Hill, 2014; Hill & Turiano, 2014). The current study examined only a few outcomes, and it would be valuable to test whether other outcomes commonly associated with purpose are equally available to purposeful people regardless of their level of education.

While it is valuable to investigate the experiences of adults who have no college experience, it would also be beneficial to know more about whether purpose is related to the decision to attend and graduate from college. Previous research has found that college attendance has the most impact in terms of post-graduation civic participation and earnings on students who are least likely to graduate (Brand, 2010; Brand & Xie, 2010); if having a sense of purpose is related to college persistence, then facilitating purpose development with interventions aimed at disadvantaged groups who are statistically less likely to graduate could be very useful. A limitation of the current study is that the people who reported “some college” as their level of education might currently be in college or they may have dropped out, but future research with more information about participants’ current education status could address the question of purpose and college persistence.

Another limitation of this study is that participants were not asked how old they were when they attended college. Since emerging adulthood is an ideal time for exploring one’s purpose in life, it may be the case that traditional college students (who are 17 or 18 during their first year) are best-suited to develop a purpose during their time in college. Previous research

has found that older students (more than 20-years-old during their first year of college) have higher levels of purpose than traditional college students (Bowman, 2010), suggesting that they may have engaged in purpose exploration before beginning college, and that they might use their college experience to explore their purpose in depth. Future research could investigate whether the kinds of engagement with purpose (e.g., exploration in breadth or exploration in depth) are dependent on one's age and context.

Finally, the adults with no college experience were not asked about the kind of job they have or how they spend most of their time. Some people who do not go to college work in jobs that are aligned with their ultimate career goals and offer opportunities for exploring one's purpose in life, whereas others are employed out of financial necessity and report little interest in their work (Blustein et al., 2002). Knowing what kind of jobs people have and whether those jobs are related to their life's direction would be useful; if most of the non-college participants in this study are working in fulfilling jobs that are associated with their purpose, then that might explain the lack of difference in overall purpose between them and college graduates. There is a need for more in-depth research on the opportunities and constraints that shape people's engagement with purpose in a variety of contexts, such as college and career.

### *Conclusion*

The research described here provided an initial examination of purpose development as experienced by adults with varying levels of education. Since much of the existing work on purpose uses college student or well-educated adult samples, it is beneficial to know more about purpose in a sample of adults with no or some college experience. That few differences emerged based on college experience speaks to the accessibility of purpose and the fact that one need not attend college in order to cultivate a direction for one's life. These results can be appreciated for

their potential to bolster the generalizability of some findings related to purpose in life, extending them to the forgotten half, and demonstrating that purpose is not a luxury, but a psychological asset that can be cultivated regardless of one's access to a college education.

*Looking Ahead to Chapter 4*

This study provided initial evidence that life experiences, such as attending and graduating college, shape one's development of purpose in life. Specifically, purpose content and the relationships between purpose and negative affect and agency were different for adults with no college experience and those who graduated with a 4-year degree. In the next chapter, I present two studies examining another life experience – specifically, being male or female – and how it relates to purpose content. This work answers the question: Are there perceived and/or actual gender differences in purpose content?

## CHAPTER 4

### His and Hers Purpose in Life?: Perceived and Actual Gender Differences in Purpose Orientations

#### **Abstract**

Existing research on purpose in life has focused primarily on individuals' overall level of purpose and how it relates to physical and psychological outcomes, paying less attention to its underlying content. In two studies, I examine perceived and actual gender differences in purpose content. In Study 1, participants exhibited gendered perceptions of purpose content, believing that women were more likely to pursue prosocial and creative purposes while men were more likely to pursue financial and personal recognition purposes. These perceptions were partially reflected by gender differences in self-reported purpose content. In Study 2, the relationship between purpose content and the degree to which participants had explored and committed to a purpose was different for males and females. Implications for the study of purpose development are discussed.

#### **Introduction**

According to social role theory, many of the social differences between women and men result from the following process: societies have a division of labor often based on sex, this division leads to expectations that women and men will acquire skills and behave in ways that facilitate success in their gender role, and enacting these gender roles over time leads to the development of attitudes, skills, and behaviors that are aligned with societal expectations about one's gender (Eagly, 1997; Eagly & Wood, 1991; Wood & Eagly, 2002). Because people tend to pursue things that they enjoy and think they will be successful at (Eccles, 2009), these attitudes, skills, and behaviors shape many choices, likely including the choice of what purpose in life to

pursue. Although there is an abundance of research on the benefits associated with purpose, there is comparatively little work investigating purpose content and what factors affect the kind of purpose that someone pursues. In the current studies, I investigated whether gender affects the content of one's purpose in life, and whether different purposes are perceived as being gendered.

I begin by summarizing existing work on the ways in which gender shapes development, followed by an outline of research on purpose in life, and then a description of how and why gender might be related to purpose content.

### *Gender and Development*

Gender influences development through individual experiences and the social norms that shape these experiences. Beginning with the recognition of one's own biological sex, very young children label themselves and others according to gender (Bussey, 2011). The development of oneself as a gendered person is inherently social, involving interactions between individuals and their parents, peers, culture, and media (Bussey, 2011; Eagly, 1997; Stockard, 1999). Although individuals do exercise agency in choosing and shaping their own environments and interactions (Bussey, 2011), these experiences and interactions are situated within an individual's society, and societies present social norms about how women and men are and should be (e.g., Eagly, 1997; Eagly, 2009; Prentice & Carranza, 2002).

Social role theory posits that gender roles derived from the division of labor between the sexes include *descriptive* norms that describe how women and men are. Examples of such norms include women are nurturing (because they are often involved in childrearing) and men are providers (because they often supply the resources necessary for a household). Gender roles also include *prescriptive* norms that prescribe how women and men *should* behave, such as women *should be* nurturing and men *should be* providers (Eagly, 2009; Eagly & Karau, 2002; Prentice &

Carranza, 2002). In the present research, I will explore whether there are descriptive norms associated with purpose content. Examples of such norms, if they exist, might include “Women are more likely to pursue a prosocial purpose in life,” and “Men are more likely to pursue a purpose in life that relates to financial success.”

The norms associated with gender roles are important because they act as a social mechanism that shapes behavior. People who violate expectations associated with gender roles may experience social consequences for doing so, such as female leaders who violate the expectation that women are more communal than agentic and are therefore seen as less likable and less effective as leaders (Eagly & Karau, 2002; Heilman & Okimoto, 2007). If there are descriptive norms associated with purpose content, then people’s decisions about what kind of purpose to pursue might be shaped by them; therefore, I will also investigate whether there are actual differences in women’s and men’s self-reported purpose content that align with perceived gender differences.

### *Purpose Development*

Purpose, or a “central, self-organizing life aim that organizes and stimulates goals, manages behaviors, and provides a sense of meaning” (McKnight & Kashdan, 2009, p. 242), is a valuable psychological asset, bolstering both physical and psychological health (e.g., Burrow, Sumner, & Ong, 2014; Hill, Jackson, Roberts, Lapsley, & Brandenberger, 2011; Hill & Turiano, 2014). In particular, being committed to a purpose is associated with a host of benefits, including higher levels of positive affect, life satisfaction, self-esteem, and happiness (Kiang & Fuligni, 2010; Paradise & Kernis, 2002; Sumner, Burrow, & Hill, 2015). Purpose development often begins during adolescence, continuing through emerging adulthood and into midlife (Bronk, Hill, Lapsley, Talib, & Finch, 2009; Reker, Peacock, & Wong, 1987). Its development consists of

exploration, considering various options for oneself, and commitment, choosing a purpose for oneself and working towards it (Blattner, Liang, Lund, & Spencer, 2013; Burrow, O'Dell, & Hill, 2010; Sumner et al., 2015).

In research that has grouped people into different statuses of purpose development based on their reported levels of exploration and commitment, the status characterized by high levels of both has been found to be the most adaptive. This combination of high exploration and high commitment is associated with greater cognitive flexibility, agency, and self-esteem (Blattner et al., 2013; Burrow et al., 2010). In the current study, I will investigate how gender relates to purpose content based on levels of exploration and commitment; in other words, is the relationship between purpose status and purpose content the same for women and men?

#### *Purpose Orientations and Gendered Expectations*

One component of an individual's purpose in life is its content, or what exactly their purpose in life entails. There are myriad possibilities for purpose content; for example, some people work towards making the world a better place, others seek to improve their own personal financial situation, some strive to serve God, while others spend their lives creating original works of art or advocating for a particular cause. Some contents can be grouped together based on their thematic similarity; striving for racial equality, trying to improve the environment, and helping others are different contents, but could all be described as having a prosocial orientation. Recent studies have recognized four broad purpose orientations: prosocial, creative, financial, and personal recognition (Hill, Burrow, Brandenberger, Lapsley, & Quaranto, 2010). Because people do not cultivate their purpose in life in a vacuum, it is worth investigating how individual and social factors, such as gender and gendered perceptions, might affect which purpose orientation someone chooses.

There is also evidence to suggest that purpose orientations might be associated with gender (Hitlin & Salisbury, 2013). Stereotypes and social expectations associate women with communal, prosocial behaviors (Eagly & Karau, 2002; Eagly & Wood, 1991; Evans & Diekman, 2009), and this perceived link exists even among elementary school students (Heyman & Legare, 2004). Across numerous cultures, women do place greater value on prosociality than men do (e.g., Schwartz & Rubel, 2005) and they rate community involvement as a more important aspiration than men do (Kasser & Ryan, 1993). Internalizing this communal gender role is linked to the endorsement of goals and careers that involve caregiving and being social (Evans & Diekman, 2009; Roberts & Robins, 2000). The construct of purpose in life encompasses goals, behaviors, values, and aspirations, and because women are seen as more communal and prosocial in their behavior, and they place more importance on values or aspirations in this domain, I hypothesize that people would perceive the prosocial orientation as something that women are more likely to pursue, and that women will score higher on this orientation than men.

Social behavior and expectations for men revolve more around agentic attributes, such as self-sufficiency, ambition, and acting as a leader (Eagly & Karau, 2002). Men tend to rate values related to power significantly higher than women do (Schwartz & Rubel, 2005), and they see themselves as being more agentic (Evans & Diekman, 2009). When asked to read about three powerful roles (such as politician or CEO), male undergraduates rated the positions more positively than women did, and importantly, more of a possibility for themselves (Lips, 2000). Men also see financial success as being important and more likely for themselves (Kasser & Ryan, 1993; Roberts & Robins, 2000). This constellation of perceptions, values, and behaviors of men link them to power and financial success, and I hypothesize that people will perceive men as more likely to pursue a purpose related to personal recognition and financial orientation, and that

men will have higher scores on these orientations than women.

The purpose orientation related to creative pursuits is less conducive to formulating a clear hypothesis. Previous research on gender and creativity has been mixed, with studies finding that any relationship to gender depends on the kind of creativity task being assessed (Stoltzfus, Nibbelink, Vredenburg, & Hyrum, 2011) or the domain in which one is being creative (e.g., visual-artistic or science-analytic) (Kaufman, 2006). One study investigating gendered perceptions of creativity asked participants to rate poems for which the author's gender was discernible from his/her name. Authors' gender did not significantly affect participants' ratings of the poem's creativity, suggesting that people do not hold strong views about one gender being more creative than the other (Kaufman, Baer, Agars, & Loomis, 2010). Thus, in the current study, I make no prediction regarding gendered perceptions of or differences in self-reported creative purpose orientation.

### **Study 1**

The goal of this study was to determine whether people perceive purpose orientations as being gendered and, if so, whether those gendered perceptions are reflective of actual gender differences in self-reported purpose orientations.

### **Method**

#### *Participants and Procedure*

Participants were recruited through Amazon.com's Mechanical Turk (MTurk) website, where individuals participate in online tasks and surveys for payment. MTurk samples are similar to community samples in terms of demographics (age, race, gender), but they tend to be older and have completed a higher level of education than college student samples (Goodman, Cryder, & Cheema, 2013; more information about the benefits and pitfalls of using MTurk

workers can be found in Paolacci & Chandler, 2014). Participants, restricted to adults (over the age of 18) who live in the United States, were paid \$0.50. As recommended by Goodman et al. (2013), a number of data integrity items were included in the survey (e.g., “Please check “Strongly Disagree” for this item”) to identify participants who were not paying attention during the task. Out of 795 participants who completed the survey, 130 incorrectly answered more than one of the data integrity items; the following analyses utilize the 665 adults who correctly answered seven or eight of the eight data integrity items in the survey. This sample was 60.8% female, 9.3% African American, 6.9% Asian American, 3.3% Latino, 2.3% Native American, 81.4% White (participants were allowed to check more than one race/ethnicity), with a mean age of 35.71 years ( $SD = 13.26$ ).

### *Measures*

*Purpose Orientations.* To assess the content of one’s purpose, a 15-item measure of purpose orientations (Hill et al., 2010) was used. The four orientations assessed with this measure are: prosocial (6 items, sample item: “Helping others who are in difficulty,”); financial (3 items, sample item: “Being successful in a business of my own,”); creative (3 items, sample item: “Creating artistic work (painting, sculpture, decorating, etc.),”); and personal recognition (3 items, sample item: “Becoming an authority in my field,”). Participants completed this scale twice: once answering based on their own experiences and indicating how personally important each item is to them on a scale anchored with 1 (*Not At All Important*) and 4 (*Essential*), and later in the survey answering the same questions based on their perceptions of which gender would be more likely to pursue each life direction, answering on a scale from 1 (*Men much more likely to pursue this direction*) to 7 (*Women much more likely to pursue this direction*). Reliabilities were adequate for self-reports (prosocial  $\alpha = .79$ , financial  $\alpha = .66$ , creative  $\alpha = .77$ ,

personal recognition  $\alpha = .75$ ) and answers based on participants' gendered perceptions (prosocial  $\alpha = .59$ , financial  $\alpha = .64$ , creative  $\alpha = .71$ , personal recognition  $\alpha = .79$ ).

## Results

Bivariate correlations, means, and standard deviations of study variables are presented in Table 4.1. It is worth noting that age was significantly negatively correlated with all of the orientations for the self, but it was not significantly correlated with any of the gendered orientation ratings.

Table 4.1 *Pearson correlations, means, and standard deviations of study variables*

	1	2	3	4	5	6	7	8	9	10
1. Age	-									
2. Gender	.061	-								
3. Prosocial (self)	-.131**	.080*	-							
4. Creative (self)	-.158**	.046	.327**	-						
5. Financial (self)	-.207**	-.104**	.269**	.191**	-					
6. Recognition (self)	-.294**	-.150**	.340**	.346**	.475**	-				
7. Prosocial (gendered)	.036	.151**	.046	.012	-.004	.036	-			
8. Creative (gendered)	-.055	.015	-.033	-.153**	.057	.016	.341**	-		
9. Financial (gendered)	-.019	.091*	.140**	.116**	.138**	.086*	-.196**	-.210**	-	
10. Recognition (gendered)	-.014	-.026	.181**	.127**	.095*	.087*	-.180**	-.224**	.649**	-
Mean	35.71	0.61	2.47	2.08	2.08	2.20	4.48	4.49	3.35	3.24
Standard deviation	13.26	0.49	0.65	0.87	0.83	0.79	0.62	0.80	0.93	0.92

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

\* . Correlation is significant at the 0.05 level (2-tailed).

Gender (0 = male, 1 = female)

### *Gendered Perceptions of Purpose Orientations*

Participants completed their gendered ratings of purpose orientation items on a scale from 1 (*Men much more likely to pursue this direction*) to 7 (*Women much more likely to pursue this direction*), with a midpoint of 4 (*Men and women equally likely to pursue this direction*). To

investigate whether orientations were perceived as being gendered, I conducted a t-test comparing each orientation's mean to 4, the midpoint of the scale. If the means are significantly different, it suggests that men or women are seen as more likely to pursue that orientation.

Prosocial and creative orientations were significantly above the midpoint (prosocial:  $M = 4.48$ ,  $SD = .62$ ,  $t(656) = 19.74$ ,  $p < .001$ , Cohen's  $d = 1.53$ ; creative:  $M = 4.49$ ,  $SD = .80$ ,  $t(660) = 15.89$ ,  $p < .001$ , Cohen's  $d = 1.23$ ), meaning that participants saw these as orientations that women are more likely to pursue. Personal recognition and financial orientations, however, were significantly below the midpoint (personal recognition:  $M = 3.24$ ,  $SD = .92$ ,  $t(661) = -21.22$ ,  $p < .001$ , Cohen's  $d = -1.65$ ; financial:  $M = 3.35$ ,  $SD = .93$ ,  $t(658) = -18.07$ ,  $p < .001$ , Cohen's  $d = -1.40$ ), suggesting that participants saw men as more likely to pursue these orientations. A multivariate analysis of variance (MANOVA) including the four orientations as dependent variables, with participant gender as a fixed factor, revealed a significant effect of gender (Pillai's trace = 0.05,  $F(4, 643) = 7.52$ ,  $p < .001$ ). Follow-up ANOVAs showed significant effects of gender for the prosocial orientation,  $F(1, 646) = 14.17$ ,  $p < .001$ , and financial orientation,  $F(1, 646) = 4.73$ ,  $p = .03$ . Overall, participants perceived the prosocial orientation as a direction that women were more likely to pursue, but the mean score was higher (i.e., more feminine) for female participants (females'  $M = 4.55$ ,  $SD = .03$ ) than for male participants ( $M = 4.36$ ,  $SD = .04$ ). For the financial orientation, overall participants perceived this as a domain that men were more likely to pursue, and this was especially true for male participants, whose mean score was lower than that of female participants ( $M = 3.25$ ,  $SD = .06$ ;  $M = 3.41$ ,  $SD = .05$ , respectively). These results are presented in Figure 4.1.

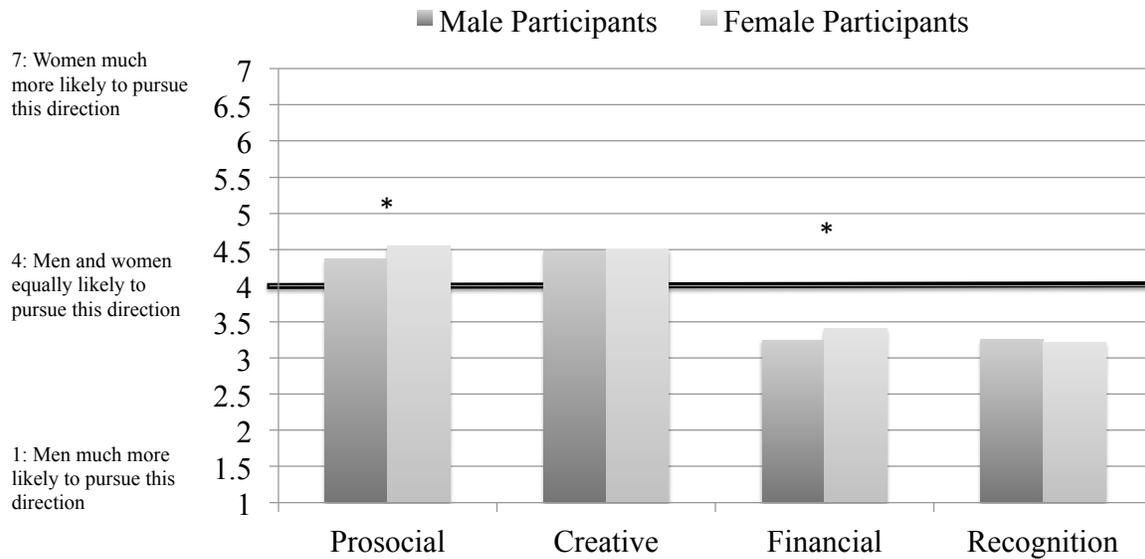


Figure 4.1 *Participants' Gendered Ratings of Purpose Orientations*

*Note: Asterisks denote variables on which the ratings made by male and female participants differed significantly*

Are men's and women's own orientation scores correlated with their gendered perceptions of each orientation? To examine this, self-report scores were correlated with gendered scores for men and women separately (for the males, the gendered ratings were reverse-scored such that higher scores reflected a perception that the orientation is more masculine). For women, their own scores on the financial and personal recognition orientations were positively correlated with their gendered ratings for those orientations ( $r = .167, p = .001$ ;  $r = .180, p < .001$ , respectively). Seeing these orientations as personally important was associated with seeing them as orientations that women were more likely to pursue. For men, financial orientation scores were negatively correlated with their gendered rating of that orientation ( $r = -.126, p = .04$ ), while their personal creative orientation scores were significantly positively correlated with their gendered rating of that orientation ( $r = .235, p < .001$ ). For all participants, then, the personal importance of the financial orientation was positively associated with beliefs

that women are likely to pursue that life direction. The personal importance of the creative orientation was associated with perceptions of that domain's masculinity for men, but not women.

These analyses revealed that this sample of adults did perceive purpose orientations as being gendered. Specifically, they perceived women as more likely to pursue a purpose related to prosocial or creative aims. Men, however, were seen as more likely to pursue a purpose related to personal recognition or financial success. Additionally, individuals' ratings of each orientation's personal importance seem to be related to their gendered perceptions, though the patterns of association differed between women and men.

#### *Gender Differences in Purpose Orientations*

Do the gendered perceptions described above reflect actual differences reported by men and women about their own experiences with purpose? To test this, a MANOVA was conducted with participants' self-reports for the four purpose orientations entered as dependent variables, with gender as a fixed factor. Pillai's trace for gender was significant, ( $0.54, F(4, 643) = 9.20, p < .001$ ), and follow-up ANOVAs show that there were significant gender differences in participants' own scores for prosocial orientation,  $F(1, 646) = 4.96, p = .03$ , personal recognition orientation,  $F(1, 646) = 15.92, p < .001$ , and financial orientation,  $F(1, 646) = 7.64, p = .006$ .

Female participants had significantly higher prosocial orientation scores ( $M = 2.51, SD = .03$ ) than males ( $M = 2.40, SD = .04$ ), though the effect size for this difference ( $d = .164$ ) was much smaller than that of the difference between participants' gendered perceptions and the gendered scale's midpoint. Males had significantly higher scores for both personal recognition ( $M = 2.35, SD = .05; M = 2.10, SD = .04; d = .312$ ) and financial orientations ( $M = 2.18, SD = .05; M = 2.00, SD = .04, d = .214$ ), but again the effect sizes for these differences were much

smaller than the effect sizes for the gendered perceptions. This suggests that participants' perceptions about the gendered nature of purpose were in line with actual gender differences in purpose for three of the four orientations (prosocial, personal recognition, and financial), but the perceived gender differences were exaggerated compared to actual differences reported by women and men.

## **Study 2**

In addition to replicating the findings of Study 1, this study sought to link gendered perceptions and self-reported purpose orientations to two key processes in the purpose development process: exploration and commitment. The social norms about appropriate behavior for women and men might shape the purpose exploration process such that people exploring their options for a purpose in life might only consider those that are seen as consistent with expectations of their gender; if that is the case (and the gendered perceptions of purpose found in Study 1 are commonly held), then purpose exploration should be associated with financial and personal recognition orientations for males, but with prosocial and creative orientations for females.

In addition to looking at gendered orientations as they relate to purpose exploration, I will also investigate purpose commitment and its interaction with exploration, as previous research has demonstrated differences among individuals who exhibit different combinations of exploration and commitment (e.g., Blattner et al., 2013; Burrow et al., 2010). By investigating exploration and commitment, components of purpose development, along with purpose orientations, I hope to shed some light on the way that gender relates to purpose development in shaping the content of purposes chosen by women and men.

## **Method**

### *Participants and Procedure*

College student participants were recruited through the university's online experiment hub. A total of 386 participants completed the survey online, but 91 did not follow directions in at least one part of the survey, so data from these participants was not analyzed. Of the 295 participants who followed directions in the survey, the mean age was 19.19 years ( $SD = 1.16$ ), 70.2% were female, 6.1% African American, 30.2% Asian American, 9.8% Latino, 1% Native American, and 57.6% White (participants were allowed to indicate more than one race/ethnicity). Participants received extra course credit in exchange for their participation.

### *Measures*

The same measures for purpose orientations (both for self-reports and gendered perceptions) from Study 1 were also used in this study.

*Purpose in life.* Purpose was assessed with the 20-item Youth Purpose Scale (Bundick et al., 2006), which has been used in previous research with adolescents and emerging adults (Bronk, et al., 2009; Hill & Burrow, 2012; Sumner et al., 2015). This measure includes items from existing measures like the Meaning in Life Questionnaire (Steger, Frazier, Oishi, & Kaler, 2006) and Ryff's (1989) Purpose in Life scale. The scale contains two subscales: 15 items assessing purpose commitment ( $\alpha = .89$ ; Sample item: "I have discovered a satisfying life purpose") and 5 items measuring purpose exploration ( $\alpha = .88$ ; Sample item: "I am seeking a purpose or mission for my life"). Responses were provided on a scale from 1 (*Strongly Disagree*) and 5 (*Strongly Agree*).

## **Results**

Bivariate correlations, means, and standard deviations of the study variables are shown in Table 4.2.

### *Gendered Perceptions of Purpose*

As in Study 1, participants' gendered ratings of the purpose orientations were tested against the midpoint of the scale (indicating that women and men are equally likely to endorse that pathway or orientation). T-tests revealed that the patterns of significance for the four purpose orientations were the same as in Study 1, with prosocial and creative orientations perceived as purposes that women are more likely to pursue ( $M = 4.47$ ,  $SD = .56$ ,  $t(266) = 13.73$ ,  $p < .001$ , Cohen's  $d = 1.68$ ;  $M = 4.50$ ,  $SD = .65$ ,  $t(265) = 12.45$ ,  $p < .001$ , Cohen's  $d = 1.53$ , respectively), and purposes related to personal recognition or financial success seen as more likely to be pursued by men ( $M = 3.29$ ,  $SD = .76$ ,  $t(268) = -15.49$ ,  $p < .001$ , Cohen's  $d = 1.89$ ;  $M = 3.20$ ,  $SD = .82$ ,  $t(268) = -15.96$ ,  $p < .001$ , Cohen's  $d = 1.94$ , respectively). To test for gender differences in participants' gendered ratings of purpose, a MANOVA with all four orientations as dependent variables and a fixed factor for gender was conducted. Pillai's Trace revealed a significant effect of gender,  $F(4, 257) = 3.63$ ,  $p = .007$ , and follow-up ANOVAs showed that there were significant differences between males' and females' ratings of the prosocial orientation ( $F(1, 260) = 6.44$ ,  $p = .012$ ). Overall, participants rated the prosocial orientation as more likely to be pursued by women, but female participants had a higher mean score than male participants ( $M = 4.51$ ,  $SD = .04$ ;  $M = 4.32$ ,  $SD = .06$ ), partially replicating the gender differences found in Study 1 and providing more evidence that females especially see these as facets of purpose that women are more likely to engage in. Unlike Study 1, however, male participants did not differ from their female peers in their gendered ratings of the financial orientation.

2 Pearson correlations, means, and standard deviations for variables (Study 2)

	1	2	3	4	5	6	7	8	9	10	11	12
al (self)	-.042	-										
ge (self)	-.052	.118	-									
al (self)	.002	.174**	.264**	-								
ition (self)	-.043	-.050	-.004	.147*	-							
al (gendered)	-.030	.024	.155*	.195**	.351**	-						
ge (gendered)	-.001	.131*	.050	-.121*	.116	.016	-					
al (gendered)	.015	-.005	-.066	-.069	.204**	.082	.354**	-				
ition (gendered)	-.017	.104	.009	.107	-.041	.076	-.281**	-.253**	-			
ge exploration	-.082	.081	-.063	.024	-.130*	-.037	-.164**	-.292**	.622**	-		
ge commitment	.140*	.114	.289**	.265**	.198**	.193**	-.026	.062	.030	-.033	-	
levation	19.19	0.72	2.76	1.69	2.48	2.58	4.47	4.50	3.20	3.29	3.71	3.60
	1.16	0.45	0.55	0.68	0.68	0.71	0.56	0.65	0.82	0.76	0.81	0.58

tion is significant at the 0.05 level (2-tailed).

ation is significant at the 0.01 level (2-tailed).

) = male, 1 = female)

Separate bivariate correlations between self-reports and gendered ratings were run for male and female participants. Among female participants, there were no significant correlations between one's own orientation score and one's gendered orientation ratings. Among male participants, however, there was a significant correlation between one's own prosocial orientation score and one's gendered orientation rating ( $r = -.25, p = .035$ ), which means that seeing the prosocial orientation as being personally important was associated with seeing it as an orientation that women were more likely to pursue (recall that the gendered ratings used for males' correlations were reversed such that higher scores mean the orientation is more likely to be pursued by men).

#### *Gender and Self-Reported Purpose*

A one-way ANOVA with purpose exploration and commitment as dependent variables was conducted to test for gender differences in these facets of purpose development. Male and female participants did not differ on either purpose exploration,  $F(1, 274) = 3.63, p = .06$ , or purpose commitment,  $F(1, 274) = 1.53, p = .22$ . If, however, gendered perceptions of purpose shape the purpose development process, one would expect exploration to be positively associated with the endorsement of gender-consistent orientations. To test this, I examined correlations between exploration and the four orientations for male and female participants separately. For males, purpose exploration was positively correlated with financial ( $r = .26, p = .025$ ) and recognition ( $r = .28, p = .015$ ) orientations. For females, purpose exploration was positively correlated with all four orientations (prosocial:  $r = .32, p < .001$ ; creative:  $r = .28, p < .001$ ; financial:  $r = .18, p = .011$ ; recognition:  $r = .15, p = .03$ ). These results are presented in Table 4.3. Using Preacher's (2002) calculator for testing the difference between two independent correlations, I compared the correlation between exploration and each orientation for women and

Table 4.3 *Correlations for Female and Male Participants Separately*

	1	2	3	4	5	6
1. Prosocial	-	-.003	.241**	.161*	.324**	.186**
2. Financial	.010	-	.136	.413**	.180*	-.086
3. Creative	.276*	.218	-	.127	.284**	.070
4. Recognition	.136	.214	.377**	-	.151*	.131
5. Purpose exploration	.176	.259*	.175	.280*	-	-.116
6. Purpose commitment	.305**	-.122	-.084	-.120	-.086	-

\*. Correlation is significant at the 0.05 level (2-tailed).

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

Correlations for male participants are presented below the diagonal; those for female participants are above the diagonal

men. This test yields a z-score for the difference, so values with an absolute value greater than 1.96 would be significant using a two-tailed test. When comparing the correlation between purpose exploration and each orientation score, none of the differences between women's and men's correlations would reach this level of significance (prosocial = 1.15, creative = .84, financial = .60, personal recognition = .98).

As in Study 1, I also tested for gender differences in the reported levels of each purpose orientation. A MANOVA with all four orientations as dependent variables and gender as a fixed factor was conducted to test for gender differences in participants' self-reported orientation scores. Pillai's Trace for gender was not significant,  $F(7, 264) = 2.17, p = .07$ , and the only significant gender effect in a series of follow-up ANOVAs was for creative orientation,  $F(1, 267) = 6.68, p = .01$ . Female participants had significantly higher creative orientation scores ( $M = 1.76, SD = .05$ ) than male participants ( $M = 1.52, SD = .08$ ). Whereas males and females in the adult sample from Study 1 differed on their prosocial, financial, and recognition orientation scores, the only orientation on which the male and female college students differed is the creative

one.

### *Cluster analysis*

To discern distinct profiles based on participants' reported levels of purpose exploration and commitment, I employed a hierarchical cluster analysis (Hair & Black, 2000) using Ward's method. I based the initial decision to classify clusters on where large jumps in the agglomeration schedule occurred, which suggested a 4-cluster solution. There were significant differences between the four clusters on the standardized exploration and commitment variables, and the cluster profiles that emerged were mostly consistent with empirical and theoretical work on identity and purpose (e.g., Burrow et al., 2010; Marcia, 1966).

To validate the 4-cluster solution, the overall sample was randomly split into two groups, and a *K*-means cluster analysis was performed separately on each half of the data. This *K*-means approach "forces" a 4-cluster solution, using the centroids from the hierarchical analysis as the starting point. The agreement between the initial clustering strategy and the *K*-means clustering strategy was sufficient (92%), indicating that most participants' cluster assignment was the same regardless of the clustering strategy used, which suggests that the 4-cluster solution was reliable.

A summary of each cluster is presented in Table 4.4. The largest cluster ( $N = 121$ , 77.7% female) was characterized by levels of exploration ( $M = -.05$ ) and commitment ( $M = .17$ ) that were close to the sample mean for each of these variables; it will be referred to as the average cluster. The second largest cluster ( $N = 72$ , 77.7% female) reported higher levels of exploration ( $M = .23$ ) and low levels of commitment ( $M = -1.25$ ), resembling what is traditionally labeled as "moratorium". There was also a cluster with low exploration ( $M = -1.39$ ) and high commitment ( $M = .99$ ), which maps onto a foreclosed profile ( $N = 46$ , 60.9% female). Finally, 37 participants (64.9% female) were assigned to a cluster characterized by high exploration ( $M = 1.06$ ) and high

commitment ( $M = .97$ ), or an achieved status. The foreclosed cluster had significantly lower exploration than the other clusters, and the achieved cluster had significantly higher exploration. In terms of purpose commitment, the moratorium cluster was significantly lower than the other three clusters, and the cluster with average levels of both exploration and commitment reported significantly less purpose commitment than the achieved or foreclosed clusters.

Table 4.4. *Mean Scores and Standard Deviations of Purpose Variables for Each Cluster*

Purpose Variable	Average ( $n = 121$ )	Moratorium ( $n = 72$ )	Foreclosed ( $n = 46$ )	Achieved ( $n = 37$ )	F ( $p$ -value)
	M(SD)	M(SD)	M(SD)	M(SD)	
Purpose Exploration	3.71 (.38) <sup>a</sup>	3.93 (.85) <sup>a</sup>	2.64 (.68) <sup>b</sup>	4.59 (.39) <sup>c</sup>	81.25 (<.001)
Purpose Commitment	3.67 (.23) <sup>a</sup>	2.86 (.33) <sup>b</sup>	4.15 (.45) <sup>c</sup>	4.14 (.35) <sup>c</sup>	213.28 (<.001)

Note: Means with different subscripts are significantly different from each other according to post-hoc Tukey test with significance levels of .05

#### *Cluster Membership and Purpose Orientation*

The four clusters described above differ in their levels of purpose exploration and commitment, but do they differ in terms of their purpose orientation scores, and is the pattern of differences the same for males and females? To answer these questions, a one-way ANOVA with purpose cluster predicting all four orientation scores was conducted for male and female participants separately. Among male participants, there were significant between group differences for the prosocial orientation,  $F(3, 71) = 3.15, p = .03$ . Specifically, the moratorium cluster's prosocial orientation scores were significantly lower ( $M = 2.45$ ) than the achieved cluster's scores ( $M = 3.01$ ). For female participants, however, there were significant differences between the clusters for both prosocial orientation scores,  $F(3, 196) = 5.11, p = .002$ , and creative orientation scores,  $F(3, 193) = 3.87, p = .01$ . The achieved cluster had scores that were significantly higher than the other three clusters for both prosocial ( $M = 3.17$ ) and creative

orientations ( $M = 2.18$ ). These results are depicted in Figure 4.2.

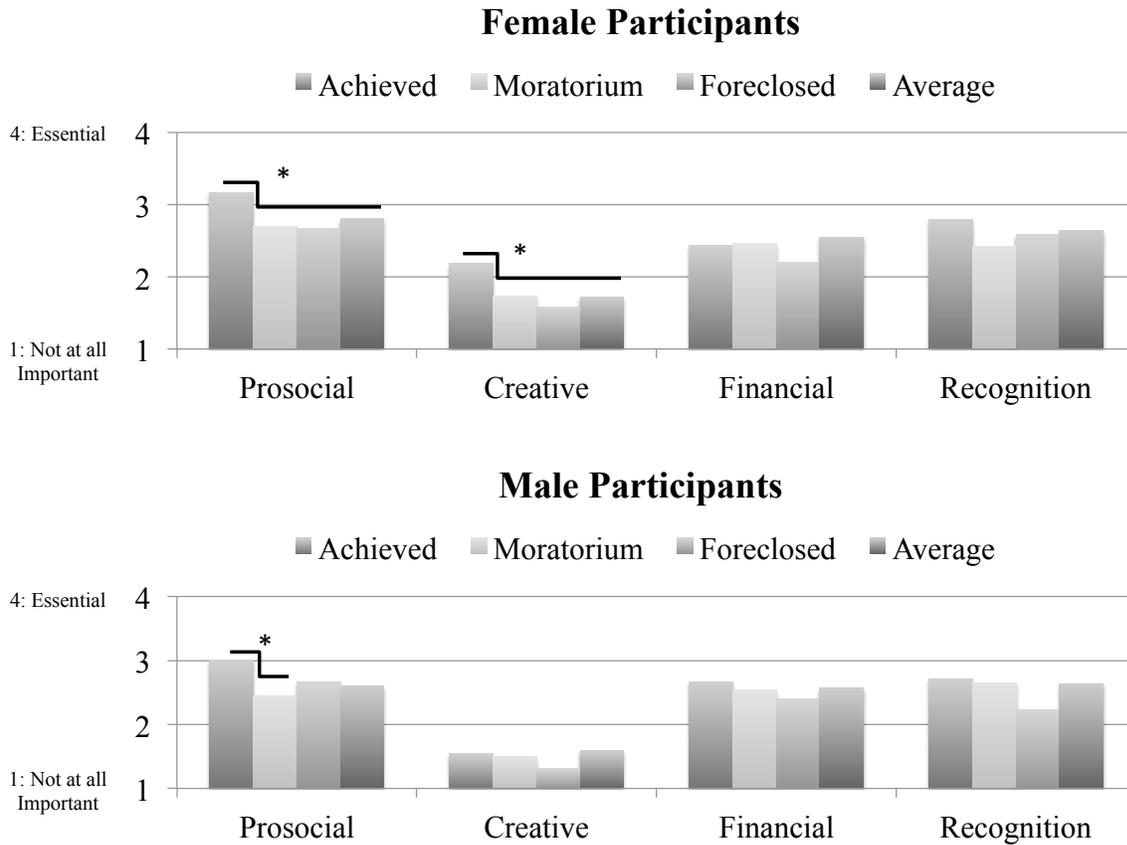


Figure 4.2 Relationships Between Cluster and Orientation by Gender

In sum, among male participants, the purpose orientation scores were very similar across clusters, with the exception of the moratorium cluster having lower prosocial scores than the achieved cluster. Among female participants, a very different pattern emerged: those in the achieved cluster differed from their same-sex peers in *all* other clusters on both the prosocial and creative orientations. It is worth noting that these are the two orientations that are seen as being associated with women, so perhaps women who are especially invested in one of these orientations are more likely to engage in high levels of exploration and commitment.

## Discussion

The research described here extends the existing literature on purpose in life in three important ways. First, participants perceived purpose orientations as being gendered. Specifically, they associated prosocial and creative orientations with females, and financial and personal recognition orientations with males. Second, these gendered perceptions varied in the extent to which they reflect women's and men's self-reported purposes: in the adult sample, the perceptions were aligned with self-reports for three of the four orientations. In the college sample, perceptions aligned with self-reports for just one of the orientations. Third, there were gender differences in the relationship between one's purpose orientation and one's levels of purpose exploration and commitment.

Researchers have investigated the benefits associated with the relative strength of one's purpose in life, paying comparatively little attention to the content of the purpose. The few studies that have examined purpose content did so without considering social factors and individual differences that might shape one's preference for a particular purpose above others (Hill et al., 2010). One social factor that might affect one's purpose orientation is gendered perceptions that are consistent with the division of labor in society (Eagly, 1997), and in Studies 1 and 2, I found that people did indeed perceive purpose content as being gendered. The perception that women are more likely to pursue a prosocial purpose is in line with an abundance of existing research linking women to prosocial behavior (e.g., Heyman & Legare, 2004; Kasser & Ryan, 1993; Schwartz & Rubel, 2005). The perception that women are more likely to pursue a creative purpose is less obvious, given that researchers have failed to find a consistent connection between creativity and one gender (Kaufman, 2006; Kaufman et al., 2010; Stoltzfus et al., 2011). People also thought that men were more likely to pursue purposes related to gaining

personal recognition or financial success, which aligns with prior research demonstrating that men tend to prioritize power and money (Kasser & Ryan, 1993; Lips, 2000; Schwartz & Rubel, 2005).

Gender roles have both descriptive norms (e.g., “women are like...”) and prescriptive norms (“women *should* be like...”)(Eagly, 2009), so these gendered perceptions of purpose likely contour purpose development through expectations such as “women are more likely to pursue a prosocial purpose in life” and, following from that, “women should pursue a prosocial purpose in life.” Given that there are social incentives for behaving in ways that are consistent with the social norms and expectations of one’s gender (Bussey, 2011; Eagly & Karau, 2002) these gendered perceptions might affect the purpose development process in that females might anticipate or encounter fewer social barriers if they pursue a prosocial or creative purpose, while men might find it more socially acceptable to work towards a purpose that is oriented towards personal recognition or financial success. Because the content of one’s purpose has potentially far-reaching consequences for major life decisions (such as what kind of career to pursue) and day-to-day goals and behavior, it is important to understand how this content is shaped by gender and gendered perceptions.

The extent to which these gendered perceptions of purpose orientations reflect actual gender differences between men and women varied in the two studies described here. In Study 1, adults’ perceptions were in line with women’s and men’s self-reported levels of prosocial, financial, and personal recognition orientations. In Study 2, college students’ gendered perceptions were only in line with the self-reported scores on the creative orientation. One possible explanation for this difference is that college students’ responses tend to be more homogeneous than those collected from adult samples (Peterson, 2001), so female and male

college students provide more similar ratings of their engagement with each purpose orientation. Additionally, other work has shown that gender differences in values among college student samples tend to be smaller than those in community samples (Schwartz & Rubel, 2005). Female college students, in particular, tend to be more similar to males (both in college and out) than females who are not in college. Whether this is due to self-selection bias (women with more “masculine” values choosing to go to college) or a process of homogenization that occurs during college remains unclear, but it might help explain why the college student sample showed fewer gender differences in their self-reported purpose orientations than the adult sample. Moreover, adults have likely had more time to work towards a particular purpose, specializing in one thing over others, and this might cause small differences that exist in early adulthood to become larger over time.

When using a cluster analysis to consider both exploration and commitment as they relate to purpose orientation in the college sample, gender differences emerged. For male participants, the four clusters were largely similar in their orientations. For female participants, however, those in the achieved cluster had significantly higher prosocial and creative orientation scores than participants in the other three clusters. The direction of this relationship is unclear: are women who report high levels of exploration and commitment more likely to pursue a gender-typical purpose orientation, or are women pursuing a gender-typical purpose orientation more likely to thoroughly explore and deeply commit to that purpose? Previous research using this person-centered approach has found that adolescents classified as achieved (high levels of purpose commitment and exploration) had better adjustment outcomes than their peers in other clusters, reporting more positive affect and agency (Burrow et al., 2010); in the study described here, the pattern of differences between those in the achieved cluster and those in the other

clusters depended on the gender of the participants, highlighting the importance of considering gender when investigating purpose development.

### *Limitations and Future Directions*

The present research is novel in its contribution to our understanding of purpose and how it is affected by gender, yet it is not without limitations. First of all, a single measure of purpose orientations was used in both studies, and this measure only assesses four orientations. While these items were drawn from a larger survey and do capture meaningful orientations (Hill et al., 2010), there are many potential purpose orientations that are not included in this scale. Future research that includes an open-ended response item in which participants can describe the content of their purpose in life would provide a more comprehensive look at potential gender differences in purpose orientations.

The cross-sectional nature of the studies presented here precludes investigation of the way gender shapes purpose development over time, though this is a promising avenue for future work. In Study 1, age was negatively correlated with scores on all four purpose orientations, but not with gendered ratings of those orientations (this pattern was not found in Study 2, likely due to the limited age range of the college sample). Some previous research has found evidence that purpose declines with age (Frazier, Newman, & Jaccard, 2007; Pinquart, 2002; Wilson et al., 2013), but this pattern of correlations suggests that, even if one's sense of purpose changes throughout the life course, one's gendered perceptions of purpose orientations might stay the same. It would also be beneficial to know when these gendered perceptions about purpose develop. If they emerge before adolescence then they likely shape the entire purpose development process, but if they emerge sometime later, then perhaps initial experiences with purpose exploration are less subject to gendered expectations. Also, individual factors other than

gender (such as the strength of one's belief in the gendered nature of purpose, one's agreement with traditional gender roles, and one's gender identification) may contour the purpose development process, and future research examining the role of these relevant individual differences would further our understanding of the relationship between purpose and gender.

Another major limitation of the two studies presented here is their use of convenience samples. Findings derived from convenience samples, especially those comprised of college students, can be difficult to replicate and have limited generalizability (Peterson, 2001; Peterson & Merunka, 2014). Future work with random samples of emerging adults and adults would be required to determine whether the results described here are generalizable and reliable.

Finally, it remains unclear why there were gender differences in self-reported endorsement of prosocial, financial, and recognition orientations in Study 1, but the only significant difference in Study 2 was for creative orientation. There is no reason to hypothesize that adult and college samples would differ on those orientations in particular, and this is an area that could be more thoroughly explored in future research.

Even with these limitations, the current studies provide an initial foray into understanding the role of gender in shaping the development of purpose in life. The descriptive aspect of gender roles, ideas about what women and men generally do (Eagly 2009), appear to seep into the process of choosing a personally meaningful purpose for one's life. Knowing that descriptive norms can lead to prescriptive norms about what kinds of purpose in life women and men should pursue, it is imperative that researchers continue investigating the way that gender and gendered expectations affect purpose development.

Given the overwhelming evidence that having a sense of purpose yields psychological and physical benefits, there is a desire to facilitate purpose development, especially among

adolescents and emerging adults. The findings described here, however, may have implications for guidance counselors, mentors, and parents who might have gendered expectations about purposes that are appropriate for females and males. Being aware and critical of these expectations might help them provide support for purpose development that is less contingent on the individual's gender, and more reliant on their aspirations and potential.

## CHAPTER 5

### Conclusion

The research presented here extends the existing literature on purpose in three important ways. First, by focusing on purpose exploration, which has received comparatively little attention from researchers, Chapters 2 and 3 demonstrate consequences of engaging in exploration and show that adults with no college experience report using purpose exploration strategies to the same extent as college graduates. Second, by investigating purpose content, also an understudied facet of purpose, Chapters 3 and 4 provide initial evidence that one's choice of content may be affected by overall level of purpose and education, and that purpose contents are perceived as being gendered. Third, by examining factors that likely contour the development of purpose in life, such as time, education level, and gender, Chapters 3, 4, and 5 deepen our understanding of contexts and characteristics that might affect findings related to purpose.

Although purpose exploration is an integral part of the purpose development process, one that helps lead to purpose commitment (Hill & Burrow, 2012), it is not well understood by researchers. By demonstrating that ongoing purpose exploration is associated with increased levels of internalizing symptoms and reduced adaptive psychological functioning, the data presented in Chapter 2 contributes to our understanding of this process. Negative consequences for ongoing identity exploration were also found, so the process of exploring one's options in either domain can be linked with decrements to well-being.

It remains unclear why purpose exploration is related to depression and anxiety, but some possible explanations can be gleaned from related work on identity exploration. Someone might begin exploring their options only after experiencing dissatisfaction with their current situation, so exploration may be preceded by feelings related to depression and anxiety (Schwartz,

Klimstra, Luyckx, Hale, & Meeus, 2012); longitudinal work on purpose exploration could help elucidate whether and how often this occurs. Also, people who are in the midst of exploring might consider many options for themselves, including negative options. Dunkel's (2000) work on possible selves, as it relates to identity exploration, provides a model for investigating the breadth and valence of purposes that people consider during the exploration process. Finally, the prospect of making long-term commitments might be another reason that emerging adults could experience anxiety when exploring their options for purpose. Ritchie et al. (2013) found that both identity exploration and commitment were associated with internalizing symptoms in a sample of emerging adults, and the authors suggested that many of their participants (aged 18-29) have probably not had to make the commitments that characterize the transition to adulthood (such as choosing a career or a spouse), and the thought of making these commitments could be anxiety-provoking.

In Chapter 3, I again investigated strategies used to explore options related to purpose. Adults with no college experience did not significantly differ from college graduates in the extent to which they use each of the three exploration strategies included in this study. The three strategies - proactive, reactive, and social learning - were derived from theory (Kashdan & McKnight, 2009), and the scale for assessing them was validated with a sample of college students and a sample of adults recruited online (Hill et al., 2014). Of that online sample, 90% of the participants reported having at least some post-secondary education, so it was unclear if people who never attended college utilized these strategies to the same extent as those who have at least some college experience. Using an online sample of adults with a range of education levels (high school graduate, some college experience, 4-year college graduate), I found that the Pathways to Purpose Scale developed by Hill and colleagues (2014) was reliable with this

sample, which is important for future research that may want to use the scale (initially validated with well-educated samples) with populations that are not in college or college graduates.

It is somewhat surprising that college graduates did not report relatively higher engagement with the purpose exploration strategies given the abundance of opportunities for purpose exploration that are usually present in a college environment (Chickering & Reisser, 1993; Pascarella, 2006), but it is valuable to know that adults who do not attend college use these strategies to the same extent. Future research on how people engage with these strategies would further clarify the process of purpose exploration. For example, one item in the Pathways to Purpose Scale asks people to rate their agreement with the statement “I actively pursue new experiences, with the hope of finding new life goals to pursue,” and knowing more about what kinds of experiences people seek out, in addition to their context and frequency, would be useful; both college students and working adults might pursue new experiences by joining a club, but they would likely join different kinds of clubs (a student club on campus versus a public group such as Rotary International), which might differentially affect their experience with purpose in life.

In Chapter 4, levels of purpose exploration and purpose commitment were used to form different clusters of purpose development. Similar cluster analytic approaches have been utilized in past research on purpose (e.g., Blattner, Liang, Lund, & Spencer, 2013; Burrow, O’Dell, & Hill, 2010), and I examined whether there were gender differences in the relationship between these clusters and purpose content. Women in the achieved cluster had significantly higher prosocial and creative orientation scores than their female peers in the other three clusters. For men, the only difference that emerged was in the prosocial orientation scores between the achieved and moratorium clusters. This suggests that, at least among college students, purpose

exploration and commitment may have a different relationship to orientations for women and men, and future longitudinal work could elucidate more about the direction of this relationship. Additionally, when the domain of interest is gendered, purpose researchers using a cluster approach should examine the patterns for females and males separately.

Demonstrating that purpose content seems to be gendered is another important contribution to the purpose literature. Very few studies have focused on purpose content, and the studies described in Chapter 4 present compelling evidence for the importance of considering social roles that might shape the content of purpose. An online sample of adults and a sample of college students both exhibited gendered perceptions of purpose content, viewing women as more likely to pursue a purpose related to prosocial or creative aims, while men were seen as more likely to pursue a purpose aimed at financial success or personal recognition.

Unsurprisingly, these perceptions are in line with existing work about descriptive norms related to women's and men's gender roles (e.g., Eagly, 1997; Eagly, 2009; Prentice & Carranza, 2002). Understanding whether and how these perceptions shape purpose development is a promising avenue for future research. Specifically, asking participants about identification with their gender, endorsement of traditional sex roles, and the purpose contents that they explore and ultimately commit to would shed more light on the way that gender can affect the processes involved in purpose development. Other social roles and groups, such as sexual orientation or religious affiliation, might also shape purpose development, and empirical investigations of these would greatly enhance our understanding of the ways in which identities and roles contour the cultivation of purpose.

The findings related to gender differences in self-reported purpose content were mixed. The adult sample reported significant differences in three of the four orientations studied,

whereas the college sample reported differences only in the creative orientation. This may be due to the college environment, where other identities not related to gender, such as “student” or “athlete,” are more prominent and can therefore reduce the salience of gender (Eagly & Wood, 1991). It might also be a result of age differences, and as people get older and spend more time working towards a particular purpose, small initial differences between groups may become larger over time. Future research that utilizes a broader age range in a single sample, in addition to asking about more orientations, would help to answer whether and when gender differences in self-reported purpose content emerge.

Purpose content was also examined in Chapter 3, investigating whether there are differences in purpose orientation by education level. When controlling for overall level of purpose, education level was not related to differences in purpose orientation. An interaction between education and overall level of purpose was significant, however, such that the extent to which high school graduates endorsed of the personal recognition orientation was not influenced by purpose level, but college graduates who had a high level of purpose had significantly higher personal recognition scores than college graduates who had a low level of purpose. This finding suggests that the content of one’s purpose can be affected by the opportunities and contexts one is exposed to, and future research can provide a more nuanced understanding of purpose content if this is taken into account.

In addition to focusing on facets of purpose that receive comparatively little empirical attention, the work presented in Chapter 3 extends research on purpose to the “forgotten half,” adults who never attend college. There are many opportunities for cultivating a sense of purpose while in college, and because many people who do not go to college do not have access to those same opportunities, it is easy to assume that they are at a disadvantage when it comes to

developing a purpose. This assumption had never been empirically tested, however, and testing for differences between college graduates and adults with no college experience was the objective of Chapter 3. Only a few purpose-related differences were detected when comparing adults with varying levels of education, suggesting that our understanding of purpose has not been too severely skewed by a reliance on college student and well-educated samples.

Including samples recruited through Mechanical Turk (MTurk), as was done in Chapters 3 and 4, is valuable because MTurk samples often include more diversity in terms of age, education, income, and race than college student samples (Buhrmester, Kwang, & Gosling, 2011; Casler, Bickel, & Hackett, 2013; Goodman, Cryder, & Cheema, 2013). Although the use of MTurk and college student samples is preferable to the use of college student samples alone (Peterson, 2001; Peterson & Merunka, 2014), it must be noted that all of the research presented here relied on convenience samples drawn from the United States. Psychologists have called for the use of more random samples (such as juries, which are a convenient source of randomly selected adults; Murray, Rugeley, Mitchell, & Mondak, 2013) and more international research (Arnett, 2008) to broaden and improve the field. Attempts to replicate the findings presented here with randomly selected samples and samples collected from countries other than the United States would be useful, and until such replications occur these findings should be seen as preliminary evidence.

The preliminary evidence resulting from the studies described here suggests that ongoing purpose exploration, like ongoing identity exploration, is linked to decrements in well-being, that people who live in the U.S. and do not attend college are not at a disadvantage when it comes to cultivating a sense of purpose in life, and that American college students and adults perceive purpose orientations as being gendered. These results will hopefully spur future research on the

contexts and characteristics that facilitate and shape the development of purpose, leading to a more inclusive, comprehensive understanding of this important psychological asset.

## REFERENCES

- Arnett, J. J. (2000). Emerging adulthood. A theory of development from the late teens through the twenties. *American Psychologist, 55*, 469-480.
- Arnett, J. J. (2004). The road to college: Twists and turns. *Emerging adulthood: The winding road from the late teens through the twenties*, 119-141.
- Arnett, J. J. (2008). The neglected 95%: Why American psychology needs to become less American. *American Psychologist, 63*, 602-614.
- Balistreri, E., Busch-Rossnagel, N. A., & Geisinger, K. F. (1995). Development and preliminary validation of the Ego Identity Process Questionnaire. *Journal of Adolescence, 18*, 179-192.
- Baumeister, R. F. (1986). *Identity: Cultural change and the struggle for self*. New York: Oxford University Press.
- Baumeister, R. F. (1987). How the self became a problem: A psychological review of historical research. *Journal of Personality and Social Psychology, 52*, 163-176.
- Baumeister, R. F., Shapiro, J. P., & Tice, D. M. (1985). Two kinds of identity crisis. *Journal of Personality, 53*, 407-424.
- Beck, A. T., Epstein, N., Brown, G., & Steer, R. A. (1988). An inventory for measuring clinical anxiety: Psychometric properties. *Journal of Consulting and Clinical Psychology, 56*, 893-897.
- Beghetto, R. A. (2006). Creative self-efficacy: Correlates in middle and secondary students. *Creativity Research Journal, 18*, 447-457.
- Bennion, L. D., & Adams, G. R. (1986). A revision of the extended version of the objective measure of ego identity status: An identity instrument for use with late

- adolescents. *Journal of Adolescent Research*, *1*, 183-197.
- Blake, S., McCarthy, C., & Krause, J. A. (2014). The paradoxical nature of academic measures and creativity. *Creative Education*, *5*, 797-802.
- Blattner, M. C., Liang, B., Lund, T., & Spencer, R. (2013). Searching for a sense of purpose: The role of parents and effects on self-esteem among female adolescents. *Journal of Adolescence*, *36*, 839-848.
- Blustein, D. L., Chaves, A. P., Diemer, M. A., Gallagher, L. A., Marshall, K. G., Sirin, S., & Bhati, K. S. (2002). Voices of the forgotten half: The role of social class in the school-to-work transition. *Journal of Counseling Psychology*, *49*, 311-323.
- Bosma, H. A., & Kunnen, E. S. (2001). Determinants and mechanisms in ego identity development: A review and synthesis. *Developmental Review*, *21*, 39-66.
- Bowman, N. A. (2010). The development of psychological well-being among first-year college students. *Journal of College Student Development*, *51*, 180-200.
- Bowman, N. A., Brandenberger, J. W., Hill, P. L., & Lapsley, D. K. (2011). The long-term effects of college diversity experiences: Well-being and social concerns 13 years after graduation. *Journal of College Student Development*, *52*, 729-239.
- Boyle, P. A., Barnes, L. L., Buchman, A. S., & Bennett, D. A. (2009). Purpose in life is associated with mortality among community-dwelling older persons. *Psychosomatic Medicine*, *71*, 574-579.
- Bozick, R., & DeLuca, S. (2011). Not making the transition to college: School, work, and opportunities in the lives of American youth. *Social Science Research*, *40*, 1249-1262.
- Brand, J. E. (2010). Civic returns to higher education: A note on heterogeneous effects. *Social Forces*, *89*, 417-433.

- Brand, J. E., & Xie, Y. (2010). Who benefits most from college? Evidence for negative selection in heterogeneous economic returns to higher education. *American Sociological Review, 75*, 273-302.
- Bronk, K. C. (2011). The role of purpose in life in healthy identity formation: A grounded model. *New Directions for Youth Development, 132*, 31-44.
- Bronk, K. C., Hill, P. L., Lapsley, D. K., Talib, N., & Finch, H. (2009). Purpose, hope, and life satisfaction in three age groups. *Journal of Positive Psychology, 4*, 500-510.
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk a new source of inexpensive, yet high-quality, data?. *Perspectives on Psychological Science, 6*, 3-5.
- Bundick, M., Andrews, M., Jones, A., Mariano, J. M., Bronk, J. C., & Damon, W. (2006). Revised youth purpose survey. Stanford, CA: Unpublished instrument, Stanford Center on Adolescence.
- Burrow, A. L., & Hill, P. L. (2011). Purpose as a form of identity capital for positive youth adjustment. *Developmental Psychology, 47*, 1196-1206.
- Burrow, A. L., O'Dell, A. C., & Hill, P. L. (2010). Profiles of a developmental asset: Youth purpose as a context for hope and well-being. *Journal of Youth and Adolescence, 39*, 1265-1273.
- Burrow, A. L., Stanley, M., Sumner, R., & Hill, P. L. (2014). Purpose in life as a resource for increasing comfort with ethnic diversity. *Personality and Social Psychology Bulletin, 40*, 1507-1516.
- Burrow, A. L., Sumner, R., & Ong, A. D. (2014). Perceived change in life satisfaction and daily negative affect: The moderating role of purpose in life. *Journal of Happiness Studies, 15*, 579-592.

- Bussey, K. (2011). Gender identity development. In S.J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of Identity Theory and Research* (pp. 603-628). Springer: New York.
- Carter, M. J. (2014). Gender Socialization and Identity Theory. *Social Sciences*, 3, 242-263.
- Casler, K., Bickel, L., & Hackett, E. (2013). Separate but equal? A comparison of participants and data gathered via Amazon's MTurk, social media, and face-to-face behavioral testing. *Computers in Human Behavior*, 29, 2156-2160.
- The Center for Information and Research on Civic Learning and Engagement. (2007). *Volunteering among non-college youth*. Medford, MA: Marcelo, K. B.
- Chickering, A. W., & Reisser, L. (1993). *Education and Identity*. San Francisco, CA: Jossey-Bass Inc.
- Côté, J. E. (1997). An empirical test of the identity capital model. *Journal of Adolescence*, 20, 577-597.
- Cramer, P. (2000). Development of identity: Gender makes a difference. *Journal of Research in Personality*, 34, 42-72.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95, 542-575.
- Diener, E., Emmons, R.A., Larsen, R.J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71-75.
- Dunkel, C. S. (2000). Possible selves as a mechanism for identity exploration. *Journal of Adolescence*, 23, 519-529.
- Eagly, A. H. (1997). Sex differences in social behavior: comparing social role theory and evolutionary psychology. *American Psychologist*, 52, 1380-1383.
- Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, 109, 573-598.

- Eagly, A. H., & Wood, W. (1991). Explaining sex differences in social behavior: A meta-analytic perspective. *Personality and Social Psychology Bulletin*, *17*, 306-315.
- Eccles, J. (2009). Who am I and what am I going to do with my life? Personal and collective identities as motivators of action. *Educational Psychologist*, *44*, 78-89.
- Egan, S. K., & Perry, D. G. (2001). Gender identity: a multidimensional analysis with implications for psychosocial adjustment. *Developmental Psychology*, *37*, 451-463.
- Eisenberg, N., Guthrie, I. K., Cumberland, A., Murphy, B. C., Shepard, S. A., Zhou, Q., & Carlo, G. (2002). Prosocial development in early adulthood: a longitudinal study. *Journal of Personality and Social Psychology*, *82*, 993-1006.
- Erikson, E. H. (1956). The problem of ego identity. *Journal of the American Psychoanalytic Association*, *4*, 56-121.
- Erikson, E. H. (1994). *Identity: Youth and crisis* (No. 7). WW Norton.
- Evans, C. D., & Diekmann, A. B. (2009). On motivated role selection: Gender beliefs, distant goals, and career interest. *Psychology of Women Quarterly*, *33*, 235-249.
- Foubert, J., Nixon, M. L., Sisson, V. S., & Barnes, A. C. (2005). A longitudinal study of Chickering and Reisser's vectors: Exploring gender differences and implications for refining the theory. *Journal of College Student Development*, *46*, 461-471.
- Frazier, L. D., Newman, F. L., & Jaccard, J. (2007). Psychosocial outcomes in later life: A multivariate model. *Psychology and Aging*, *22*, 676-689.
- Goodman, J. K., Cryder, C. E., & Cheema, A. (2013). Data collection in a flat world: The strengths and weaknesses of Mechanical Turk samples. *Journal of Behavioral Decision Making*, *26*, 213-224.
- Goyette, K. A. (2008). College for some to college for all: Social background, occupational

- expectations, and educational expectations over time. *Social Science Research*, 37, 461-484.
- Grotevant, H. D. (1987). Toward a process model of identity formation. *Journal of Adolescent Research*, 2, 203-222.
- Hair, J. F., & Black, W. C. (2000). Cluster analysis. In L. G. Grimm & P. R. Yarnold (Eds.), *Reading and understanding more multivariate statistics* (pp. 147–206). Washington, DC: American Psychological Association.
- Halperin, S. (Ed.). (1998). The forgotten half revisited: American youth and young families, 1988-2008. Washington, DC: American Youth Policy Forum.
- Heilman, M. E., & Okimoto, T. G. (2007). Why are women penalized for success at male tasks? The implied communality deficit. *Journal of Applied Psychology*, 92, 81-92.
- Heyman, G. D., & Legare, C. H. (2004). Children's beliefs about gender differences in the academic and social domains. *Sex Roles*, 50, 227-239.
- Hill, P. L. & Burrow, A. L. (2012): Viewing purpose through an Eriksonian lens. *Identity: An International Journal of Theory and Research*, 12, 74-91.
- Hill, P. L., Burrow, A. L., Brandenberger, J. W., Lapsley, D. K., & Quaranto, J. C. (2010). Collegiate purpose orientations and well-being in early and middle adulthood. *Journal of Applied Developmental Psychology*, 31, 173-179.
- Hill, P. L., Jackson, J. J., Roberts, B. W., Lapsley, D. K., & Brandenberger, J. W. (2011). Change you can believe In: Changes in goal setting during emerging and young adulthood predict later adult well-being. *Social Psychological and Personality Science*, 2, 123-131.
- Hill, P. L., Sumner, R., & Burrow, A. L. (2014). Understanding the pathways to purpose:

- Examining personality and well-being correlates across adulthood. *Journal of Positive Psychology, 9*, 227-234.
- Hill, P. L., & Turiano, N. A. (2014). Purpose in life as a predictor of mortality across adulthood. *Psychological Science, 25*, 1482-1486.
- Hitlin, S., & Salisbury, M. H. (2013). Living life for others and/or oneself: The social development of life orientations. *Social Science Research, 42*, 1622-1634.
- Hope, N. H., Milyavskaya, M., Holding, A. C., & Koestner, R. (2013). Self-growth in the college years: Increased importance of intrinsic values predicts resolution of identity and intimacy stages. *Social Psychological and Personality Science, 5*, 705-712.
- Higher Education Research Institute at UCLA. (2013). Class of 2012: Findings from the College Senior Survey. University of California, Los Angeles: Cooperative Institutional Research Program (CIRP).
- Ivcevic, Z., & Kaufman, J. C. (2013). The can and cannot do attitude: How self-estimates of ability vary across ethnic and socioeconomic groups. *Learning and Individual Differences, 27*, 144-148.
- Judson, K. M., & Taylor, S. A. (2014). Moving from marketization to marketing of higher education: The co-creation of value in higher education. *Higher Education Studies, 4*, 51-67.
- Karp, D. A., Holmstrom, L. L., & Gray, P. S. (1998). Leaving home for college: Expectations for selective reconstruction of self. *Symbolic Interaction, 21*, 253-276.
- Kashdan, T. B., & McKnight, P. E. (2009). Origins of purpose in life: Refining our understanding of a life well lived. *Psychological Topics, 18*, 303-316.
- Kasser, T., & Ryan, R. M. (1993). A dark side of the American dream: Correlates of financial

- success as a central life aspiration. *Journal of Personality and Social Psychology*, 65, 410-422.
- Kaufman, J. C. (2006). Self-reported differences in creativity by ethnicity and gender. *Applied Cognitive Psychology*, 20, 1065-1082.
- Kaufman, J. C. (2010). Using creativity to reduce ethnic bias in college admissions. *Review of General Psychology*, 14, 189-203.
- Kaufman, J. C., Baer, J., Agars, M. D., & Loomis, D. (2010). Creativity stereotypes and the consensual assessment technique. *Creativity Research Journal*, 22, 200-205.
- Kiang, L., & Fuligni, A. J. (2010). Meaning in life as a mediator of ethnic identity and adjustment among adolescents from Latin, Asian, and European American backgrounds. *Journal of Youth and Adolescence*, 39, 1253-1264.
- Kidwell, J.S., Dunham, R.M., Bacho, R. A., Pastorino, E., & Portes, P. R. (1995). Adolescent identity exploration: A test of Erikson's theory of transitional crisis. *Adolescence*, 30, 785-793.
- Koyama, J. (2007). Approaching and attending college: Anthropological and ethnographic accounts. *The Teachers College Record*, 109, 2301-2323.
- Kroger, J., & Marcia, J. E. (2011). The identity statuses: Origins, meanings, and interpretations. In Schwartz, S. J., Luyckx, K., & Vignoles, V. (Eds.) *Handbook of Identity Theory and Research* (pp. 31-53). New York: Springer.
- Kuh, G. D. (1993). In their own words: What students learn outside the classroom. *American Educational Research Journal*, 30, 277-304.
- Laird, T. F. N. (2005). College students' experiences with diversity and their effects on academic self-confidence, social agency, and disposition toward critical thinking. *Research in*

- Higher Education*, 46, 365-387.
- Lindholm, J. (2006). Deciding to forgo college: Non-college attendees' reflections on family, school, and self. *The Teachers College Record*, 108, 577-603.
- Lips, H. M. (2000). College students' visions of power and possibility as moderated by gender. *Psychology of Women Quarterly*, 24, 39-43.
- Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling*, 9, 151-173.
- Luyckx, K., Klimstra, T. A., Duriez, B., Van Petegem, S., Beyers, W., Teppers, E., & Goossens, L. (2013). Personal identity processes and self-esteem: Temporal sequences in high school and college students. *Journal of Research in Personality*, 47, 159-170.
- Luyckx, K., Schwartz, S. J., Berzonsky, M. D., Soenens, B., Vansteenkiste, M., Smits, I., & Goossens, L. (2008a). Capturing ruminative exploration: Extending the four-dimensional model of identity formation in late adolescence. *Journal of Research in Personality*, 42, 58-82.
- Luyckx, K., Schwartz, S. J., Goossens, L., & Pollock, S. (2008b). Employment, sense of coherence, and identity formation contextual and psychological processes on the pathway to sense of adulthood. *Journal of Adolescent Research*, 23, 566-591.
- Machell, K. A., Disabato, D. J., & Kashdan, T. B. (2015). Buffering the negative impact of poverty on youth: The power of purpose in life. *Social Indicators Research*, 1-17.
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology*, 3, 551-558.
- Marcia, J. E. (1980). Identity in adolescence. In J. Adelson (Ed.), *Handbook of Adolescent*

- Psychology* (pp. 159–187). New York: Wiley.
- McKnight, P. E., & Kashdan, T. B. (2009). Purpose in life as a system that creates and sustains health and well-being: An integrative, testable theory. *Review of General Psychology, 13*, 242-251.
- Meeus, W., Iedema, J., Helsen, M., & Vollebergh, W. (1999). Patterns of adolescent identity development: Review of literature and longitudinal analysis. *Developmental Review, 19*, 419-461.
- Meyer, M., Cimpian, A., & Leslie, S. J. (2015). Women are underrepresented in fields where success is believed to require brilliance. *Frontiers in Psychology, 6*, 1-12.
- Murray, G. R., Rugeley, C. R., Mitchell, D. G., & Mondak, J. J. (2013). Convenient yet not a convenience sample: Jury pools as experimental subject pools. *Social Science Research, 42*, 246-253.
- Oppenheimer, D. M., Meyvis, T., & Davidenko, N. (2009). Instructional manipulation checks: Detecting satisficing to increase statistical power. *Journal of Experimental Social Psychology, 45*, 867-872.
- Paolacci, G., & Chandler, J. (2014). Inside the Turk: Understanding Mechanical Turk as a participant pool. *Current Directions in Psychological Science, 23*, 184-188.
- Paradise, A. W., & Kernis, M. H. (2002). Self-esteem and psychological well-being: Implications of fragile self-esteem. *Journal of Social and Clinical Psychology, 21*, 345-361.
- Pascarella, E. T. (2006). How college affects students: Ten directions for future research. *Journal of College Student Development, 47*, 508-520.
- Peer, E., Vosgerau, J., & Acquisti, A. (2014). Reputation as a sufficient condition for data quality

- on Amazon Mechanical Turk. *Behavior Research Methods*, 46, 1023-1031.
- Peterson, R. A. (2001). On the use of college students in social science research: Insights from a second-order meta-analysis. *Journal of Consumer Research*, 28, 450-461.
- Peterson, R. A., & Merunka, D. R. (2014). Convenience samples of college students and research reproducibility. *Journal of Business Research*, 67, 1035-1041.
- Pinquart, M. (2002). Creating and maintaining purpose in life in old age: A meta-analysis. *Ageing International*, 27, 90-114.
- Preacher, K. J. (2002, May). Calculation for the test of the difference between two independent correlation coefficients [Computer software]. Available from <http://quantpsy.org>.
- Prentice, D. A., & Carranza, E. (2002). What women and men should be, shouldn't be, are allowed to be, and don't have to be: The contents of prescriptive gender stereotypes. *Psychology of Women Quarterly*, 26, 269-281.
- Pryor, J. H., Hurtado, S., Saenz, V. B., Santos, J. L., & Korn, W. S. (2007). *The American freshman: Forty year trends*. Los Angeles: Higher Education Research Institute.
- Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385-401.
- Ritchie, R. A., Meca, A., Madrazo, V. L., Schwartz, S. J., Hardy, S. A., Zamboanga, B. L., ... & Lee, R. M. (2013). Identity dimensions and related processes in emerging adulthood: Helpful or harmful?. *Journal of Clinical Psychology*, 69, 415-432.
- Roberts, B. W., & Robins, R. W. (2000). Broad dispositions, broad aspirations: The intersection of personality traits and major life goals. *Personality and Social Psychology Bulletin*, 26, 1284-1296.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on

- hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141-166.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069–1081.
- Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69, 719-727.
- Scheier, M. F., Wrosch, C., Baum, A., Cohen, S., Martire, L. M., Matthews, K. A., ... & Zdaniuk, B. (2006). The life engagement test: Assessing purpose in life. *Journal of Behavioral Medicine*, 29, 291-298.
- Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A., & King, J. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review. *The Journal of Educational Research*, 99, 323-338.
- Schwartz, S. J., Beyers, W., Luyckx, K., Soenens, B., Zamboanga, B. L., Forthun, L.F., ... Waterman, A. S. (2011). Examining the light and dark sides of emerging adults' identity: A study of identity status differences in positive and negative psychosocial functioning. *Journal of Youth and Adolescence*, 40, 839-859.
- Schwartz, S. J., Côté, J. E., & Arnett, J. J. (2005). Identity and agency in emerging adulthood: Two developmental routes in the individualization process. *Youth & Society*, 37, 201-229.
- Schwartz, S. J., Klimstra, T. A., Luyckx, K., Hale III, W. W., & Meeus, W. H. (2012). Characterizing the self-system over time in adolescence: Internal structure and associations with internalizing symptoms. *Journal of Youth and Adolescence*, 41, 1208-1225.
- Schwartz, S. H., & Rubel, T. (2005). Sex differences in value priorities: Cross-cultural and

- multimethod studies. *Journal of Personality and Social Psychology*, 89, 1010-1028.
- Schwartz, S. J., Zamboanga, B. L., Weisskirch, R. S., & Rodriguez, L. (2009). The relationships of personal and ethnic identity exploration to indices of adaptive and maladaptive psychosocial functioning. *International Journal of Behavioral Development*, 33, 131-144.
- Sheldon, K. M., & Kasser, T. (2001). Getting older, getting better? Personal strivings and psychological maturity across the life span. *Developmental Psychology*, 37, 491-501.
- Snyder, T.D., & Dillow, S.A. (2013). Digest of Education Statistics 2012 (NCES 2014-015). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.
- Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., ... & Harney, P. (1991). The will and the ways: development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology*, 60, 570-585.
- Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The Meaning in Life Questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology*, 53, 80-93.
- Stockard, J. (1999). Gender socialization. In J. S. Chafetz (Ed.) *Handbook of the Sociology of Gender*, (pp. 215-227). Kluwer Academic/Plenum Publishers: New York.
- Stoltzfus, G., Nibbelink, B. L., Vredenburg, D., & Hyrum, E. (2011). Gender, gender role, and creativity. *Social Behavior and Personality*, 39, 425-432.
- Sumner, R., Burrow, A. L., & Hill, P. L. (2015). Identity and purpose as predictors of subjective well-being in emerging adulthood. *Emerging Adulthood*, 3, 46-54.
- Vogelgesang, L. J., & Astin, A. W. (2000). Comparing the effects of community service and service-learning. *Michigan Journal of Community Service Learning*, 7, 25-34.

- Waterman, A. S., Schwartz, S. J., Hardy, S. A., Kim, S. Y., Lee, R. M., Armenta, B. E., ... & Agocha, V. B. (2013). Good choices, poor choices: Relationship between the quality of identity commitments and psychosocial functioning. *Emerging Adulthood, 1*, 163-174.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063–1070.
- Wilson, R. S., Boyle, P. A., Segawa, E., Yu, L., Begeny, C. T., Anagnos, S. E., & Bennett, D. A. (2013). The influence of cognitive decline on well-being in old age. *Psychology and Aging, 28*, 304-313.
- Wood, W., & Eagly, A. H. (2002). A cross-cultural analysis of the behavior of women and men: implications for the origins of sex differences. *Psychological Bulletin, 128*, 699-727.
- Yoder, A. E. (2000). Barriers to ego identity status formation: A contextual qualification of Marcia's identity status paradigm. *Journal of Adolescence, 23*, 95-106.