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# The relationship between congruent dimensions of the self and nostalgia

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**The relationship between congruent dimensions of the self and nostalgia**

by

**Adrienne Austin**

A thesis submitted to the graduate faculty  
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Major: Psychology

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## TABLE OF CONTENTS

	Page
ABSTRACT.....	iv
CHAPTER 1 INTRODUCTION .....	1
CHAPTER 2 LITERATURE REVIEW .....	4
An Integrative Model of Personality.....	4
Life Narratives and the Self .....	6
Nostalgia.....	8
The Importance of Congruence .....	10
Agentic and Communal Features of Personality .....	12
The Present Research.....	14
CHAPTER 3 STUDY 1 .....	17
Overview.....	17
Power Analysis .....	17
Method.....	18
Results.....	22
Discussion.....	32
CHAPTER 4 STUDY 2 .....	34
Overview.....	34
Power Analysis .....	34
Method.....	35
Results.....	39

Discussion.....	48
CHAPTER 5 GENERAL DISCUSSION .....	50
Summary.....	50
Limitations .....	53
Conclusion .....	55
REFERENCES .....	56
APPENDIX A IRB APPROVAL.....	64
APPENDIX B AGENCY AND COMMUNION ITEMS .....	65
APPENDIX C THE LIFE STORY INTERVIEW.....	66
APPENDIX D NOSTALGIA QUESTIONNAIRE.....	68
APPENDIX E SELF-ESTEEM QUESTIONS.....	69
APPENDIX F OPTIMISM QUESTIONNAIRE.....	70
APPENDIX G POSITIVE AND NEGATIVE AFFECT SCHEDULE .....	71
APPENDIX H DEMOGRAPHICS QUESTIONNAIRE .....	72
APPENDIX I ACHIEVEMENT LIFE NARRATIVE INTERVIEW .....	73
APPENDIX J RELATIONSHIP LIFE NARRATIVE INTERVIEW .....	75

## ABSTRACT

The purpose of this research was to investigate the effects of agentic and communal trait-narrative congruence on nostalgia and to replicate previous research showing that self-esteem and positive affect are mediators of the relationship between nostalgia and optimism (Cheung et al., 2013). In Study 1, participants completed ratings of agentic and communal traits and were asked to write about a positive previous life event and complete measures assessing nostalgia, self-esteem, optimism, and positive affect. It was predicted that the degree to which individuals rated themselves on agentic traits would influence nostalgia after writing an achievement-focused narrative. It was also predicted that the degree to which individuals rated themselves on communal traits would influence nostalgia after writing a relationship-focused narrative. The hypothesis was not supported; writing a relationship-focused narrative was significantly related to greater nostalgia regardless of trait ratings. In Study 2, all predictions and measures remained the same, however, narrative focus was manipulated. Participants were randomly assigned to write about a previous life event focused on an achievement or focused on a relationship. The hypothesis was partially supported; communal trait-narrative congruence was a significant predictor of nostalgia, however agentic trait-narrative congruence was not. Both Study 1 and Study 2 found that self-esteem and positive affect mediated the relationship between nostalgia and optimism.

## CHAPTER 1

### OVERVIEW

Life narratives provide the basis of one's identity and have the power to reveal relationships among an individual's traits, goals, and behaviors. For example, warm and caring behavior is related to the trait of agreeableness (Graziano & Eisenberg, 1997), and individuals who are high on the trait of agreeableness have been found to construct life narratives that contain communal themes of love, intimacy, and care (McAdams et al., 2004). Additionally, dimensions of the self that are congruent (e.g., agreeableness trait and communal-themed self-narratives) have important implications for one's perceptions, expectations, and behaviors. For instance, a recent study demonstrated that the congruence between one's traits and the related behaviors predicted positive psychological adjustment (Sherman, Nave, & Funder, 2012).

The present project examined the relationships between life narratives and the Big Two personality dimensions: agency and communion. Agency and communion are argued to be the two fundamental modalities of human existence and the two primary content dimensions driving self and other perceptions (Abele & Wojciszke, 2014; Bakan, 1966). Abele and Wojciszke (2007) indicate that agency is made up of traits that highlight the independent features of the self, such as assertiveness, intelligence, self-reliance, and efficiency in goal attainment. Conversely, communion incorporates traits that define the self in terms of social relationships, such as loyalty, care for others, cooperativeness, and trustworthiness (Abele & Wojciszke, 2007). It has been suggested that agentic and communal traits and are reinforced through telling stories about experiences (McLean, Pasupathi, & Pals, 2007). Additionally, previous research has shown that individuals who were high on agency and low on communion (e.g., narcissism) showed greater

agentic themes than communal themes in nostalgic narratives (Hart et al., 2011). This suggests that the experience of nostalgia could be influenced by congruence between an individual's traits and life narratives. Building on this, the present studies investigated whether congruence between agentic and communal traits and related themes in one's life narratives (e.g., personal achievement versus social relationship themes) influenced the experience of nostalgia.

Nostalgia is defined as a bittersweet, sentimental desire for the past (Sedikides et al., 2015). It can be distinguished from other affective experiences in that it serves four specific functions for the self: 1) increases positive affect, 2) increases self-esteem, 3) increases meaning in one's life, and 4) fosters social connectedness (Hepper, Ritchie, Sedikides, & Wildschut, 2012). Furthermore, the positive self-benefits triggered by the experience of nostalgia have been shown to predict increases in optimism about the future (Cheung et al., 2013). In turn, optimism also provides numerous advantages for the self, including greater mental and physical well-being, as well as more adaptive coping strategies during stressful times (Scheier & Carver, 1993). Optimism also has social benefits: Individuals who are optimistic tend to be viewed more favorably by others than individuals who are pessimistic (Helweg-Larsen, Sadeghian, & Webb, 2002). Thus, the self-benefit and social connectedness functions of nostalgia are reflective of agency and communion, respectively (Hart et al., 2011).

Given the personal and interpersonal benefits of nostalgia, the current project sought to examine whether congruency between agentic and communal traits and life narratives predicted feelings of nostalgia (Vess, Arndt, Routledge, Sedikides, & Wildschut, 2012). It was expected that individuals with more agentic traits who wrote life narratives that emphasized the independent self (e.g., a personal achievement life event) would experience greater feelings of nostalgia than individuals who rated themselves low on agentic traits. Conversely, it was

expected that individuals with more communal traits who wrote life narratives that emphasized the relational self (e.g., a relationship-focused life event) would experience greater feelings of nostalgia than individuals who rated themselves low on communal traits. Replicating Cheung et al. (2013), it was also predicted that the relationship between nostalgia and optimism would be mediated by self-esteem and positive affect. Additionally, in a second study that manipulated the type of life experience participants reflected on (e.g., personal achievement versus close relationship), it was predicted that congruence between traits and narrative focus would lead to greater nostalgia and in turn, greater self-esteem and optimism. Therefore, the following sections of the present paper examine how different aspects of the self are related and how congruence among them might predict feelings of nostalgia and in turn, self-esteem and optimism.



## CHAPTER 2

### LITERATURE REVIEW

#### **An Integrative Model of Personality**

One method for studying the self is to examine the distinct levels of self-knowledge that make up the personality as a whole. Some scholars have argued that personality traits alone are insufficient to explain differences in behavior and that motives and life experiences play a crucial role in the makeup of the self (McAdams & Olson, 2010; Murray 1938). For instance, previous research has demonstrated that traits and life narratives each contribute to the development and maintenance of the other (McLean, Pasupathi, & Pals, 2007). McAdams and Olson (2010) proposed an integrative model of personality that consists of three separate layers of self: 1) dispositional traits, 2) characteristic adaptations, and 3) integrative life narratives.

In their model, dispositional traits occupy the first layer of personality. According to McAdams and Olson (2010), these traits develop in infancy, are related to consistent patterns in thoughts, feelings, and behaviors, and remain relatively stable across time and situation. This foundational layer of personality represents each individual as a *social actor*, and certain attributes that are specific to each individual are brought to the surface through everyday social interactions. For example, some actors are perceived as having an overall positive disposition that fosters smoother social interactions, whereas others may have a more anxious disposition that could adversely influence their perceptions and interactions with others (McAdams & Olson, 2010).

The second layer of personality is comprised of characteristic adaptations or an individual's motives, values, and goals (McAdams & Olson, 2010). At this layer, people make

decisions and plans for their lives, acting as *motivational agents*. Pursuing and achieving goals becomes a prominent feature in one's life as the personality develops, with this particular layer emerging in early childhood. Goals can vary in magnitude and can be immediate (e.g., going to the post office today) or more long-term (e.g., maintaining good health). Interestingly, some individual differences in goal formulation can be explained by dispositional traits. For instance, when an individual perceives a personality trait of themselves to be deficient in some way (e.g., unreliable), they will be more likely to create a goal that will make up for the personality trait deficit (e.g., aim to finish a project that they started). Similarly, individuals also create goals that supplement positive personality traits (Reisz, Boudreaux, & Ozer, 2013). For example, college students who are highly conscientious may create a goal to graduate with honors.

The third and top layer of personality includes integrative life narratives, which make up an individual's narrative identity and represent the self as an *autobiographical author* (McAdams & Olson, 2010). Life narratives are the last of the three layers to develop, are shaped by societal expectations and norms, and are also influenced by both traits and characteristic adaptations. Narrative identities are created by reconstructing events from the past to help people make sense of their previous life experiences. Narrative identities begin to develop during adolescence and as we age, our life narratives increase in complexity as they integrate life experiences and wisdom gained. Life narratives help us communicate who we are, where we have been, and where we are going. McAdams and Olson (2010) conceive of this third layer of personality as reflective of both one's self as well as one's culture because these life narratives develop over time through social interactions.

The present project expanded on this work to examine whether congruity among layers of personality would lead to positive psychological outcomes, namely the experience of nostalgia

and in turn, self-esteem and optimism. As previous research has identified patterns of agency and communion across the second and third layers (McAdams, Hoffman, Mansfield, & Day, 1996), the present project investigated agency and communion at the first and third layers. The following section provides an overview of research demonstrating how these three layers of personality are integrated and evidence for positive psychological outcomes as a result of their integration.

### **Life Narratives and the Self**

Life narratives are rich sources of information that reveal patterns and themes reflecting individual identities. Previous investigations into life narrative content have provided insight into how life experiences develop and alter the self-concept. For instance, some personality traits are reflected in life narratives. More specifically, relationships between personality traits (layer 1) and life narratives (layer 3) have been investigated by analyzing the life narrative's emotional tone, complexity, and its themes of agency (e.g., self-mastery and achievement) and communion (e.g., love and community; McAdams et al., 2004). According to McAdams et al. (2004), individuals with greater anxiety tend to have consistently negative emotional tones throughout their life narratives than those who have less anxiety. They also found that people who are more open tend to construct more complex life narratives, and people who are generally agreeable narrate more communion-themed life experiences. Additionally, personality traits can partially explain the relationship between interpretations of the past in life narratives and well-being. For example, openness to experience has been shown to be related to a healthier interpretation of past negative events, resulting in narratives of self-growth and greater overall well-being (Pals & McAdams, 2011). The relationship between traits and life narratives are

important because they provide evidence for the ways in which traits influence how we narrate our life experiences and the positive psychological outcomes of these narrative interpretations.

Consistency among traits, goals, and life narratives can lead to positive well-being. McGregor, McAdams, and Little (2005) conducted three studies assessing whether congruence among college students' personality traits, goals, and life narrative identities was predictive of the students' overall happiness. As typical goals in college include making new friends and doing well in classes, the researchers focused on social and academic features of personality traits. More specifically, they created a Sociable Traits Index (STI) that aggregated scores across Extraversion, Agreeableness, and Conscientiousness (reverse-scored) to identify individuals who would be considered more or less social overall. Traits and goals were considered congruent if students received high scores on the Sociable Traits Index (indicating more sociable individuals) *and* if student goals contained high social themes. The researchers predicted that students who considered themselves highly sociable would be happier when their goals included social themes, such as attending social gatherings and making new friends than students who were less sociable. Additionally, in studies 2 and 3, participants completed a Life Story Episode Interview that was coded for social themes. Results indicated that both trait-goal congruence and trait-life story congruence predicted happiness. Moreover, there was also a positive relationship between social themes in goals and social themes in life stories. This research provides evidence that trait and life narrative congruence can lead to positive psychological benefits.

The previous research on life narratives provides evidence of integration of the three layers of personality and also demonstrates how this integration leads to positive consequences for psychological well-being. However, the relationships among layers of personality, the construction of life narratives, and feelings of nostalgia are unknown.

## Nostalgia

Nostalgia is an emotion that elicits mostly positive, but also bittersweet feelings of warmth and yearning about the past and can occur as an individual reflects on previous life experiences (Davis, 1979; Sedikides et al., 2015). Although nostalgia is defined as an emotion, it is considered a blended state of affective and cognitive processes (Hepper et al., 2012). Other examples of blended states are gratitude (Lambert, Graham, & Fincham, 2009) and jealousy (Fitness & Fletcher, 1993). Previous research has indicated that individuals across cultures conceive of nostalgia as being made up of three primary factors: 1) longing for the past, 2) negative affect, and 3) positive affect (Hepper et al., 2014). For instance, nostalgia can occur when individuals reminisce about fond memories from the past that have personal meaning or involve close relationships with others (Sedikides et al., 2015). Individuals tend to view these memories through rose-colored glasses and then experience longing for this particular time (Hepper et al., 2012). This longing includes primarily positive emotions (e.g., warmth, affection, joy, elation), but also to a lesser extent, includes negative emotions (sadness, loss, fear; Holak & Havlena, 1998). Although previous research has provided evidence that nostalgia is indeed a mixed emotional state, whether these emotions occur simultaneously or sequentially has yet to be determined (Barrett et al., 2010).

Life narratives have become a frequently used method for distinguishing nostalgic from non-nostalgic memories, as well as for identifying the positive psychological outcomes that result from a nostalgic feeling. Wildschut et al. (2006) demonstrated that life narratives that led to nostalgia were more likely to include themes of redemption (e.g., stories that begin negatively and end positively), more positive than negative affective content, and focused either on relationships (e.g., close friends, relationships) or personally important life events (e.g.,

graduation). Additionally, the researchers found that nostalgia resulted in greater self-esteem and positive affect. The researchers proposed that nostalgia is a way of affirming aspects of the self that individuals hold in high regard. For example, in a study examining the experience of nostalgia in narcissists, researchers found that individuals who rated themselves high on narcissistic traits included more agentic themes in narratives describing a nostalgic memory (Hart et al., 2011). Accordingly, this suggests that nostalgia might be most likely to occur when themes in life narratives are congruent with an individual's perception of the self.

Previous research has shown that nostalgia can occur when individuals who are more socially oriented experience loneliness (Wildschut, Sedikides, Routledge, Arndt, & Cordaro, 2010). These individuals use the experience of nostalgia as a way to feel more socially connected. As a result, nostalgia increases positive affect and self-esteem, as well as greater perceptions of social support and meaning in life (Routledge et al., 2011). This increase in well-being as a result of nostalgia has also been shown buffer against threats to the self (Vess et al., 2012). Interestingly, nostalgia not only has benefits for the present, but also encourages a brighter outlook on the future. Cheung et al. (2014) conducted four studies showing that 1) nostalgic narratives contain optimistic themes, 2) nostalgic events rather than typical events lead to greater optimism, 3) self-esteem and positive affect mediate the relationship between nostalgia and optimism, and 4) nostalgia promotes social connections, which leads to increases in self-esteem and optimism.

Both agency and communion have been identified as primary components of nostalgic narratives. For instance, research conducted by Abeyta, Routledge, Sedikides, and Wildschut (2014) identified social content (i.e., relationships), attachment-related content (i.e., feeling loved), and agentic content (i.e., personal competence) as the primary themes in nostalgic, rather

than ordinary memory narratives. Although feelings of nostalgia can be triggered when individuals reflect on previous life events that involve individual achievements (e.g., graduation), and personal identity has been identified as an important aspect of nostalgia (Abeyta et al., 2014), nostalgia appears to be a predominately social construct and many memories that prompt nostalgia feature the self in a context surrounded by close others (Wildschut, Sedikides, Arndt, & Routledge, 2006). However, drawing on research by Hart et al., 2011, the present research sought to examine whether achievement-focused memories would also lead to nostalgia for those individuals who rated themselves high on agentic traits, even if these memories did not involve close relationships. Additionally, even though it was expected that relationship-focused narratives would elicit nostalgia, it was predicted that nostalgia would be enhanced for individuals who rated themselves high on communal traits rather than low on communal traits.

### **The Importance of Congruence**

Previous research has revealed positive consequences as a result of having congruence between dimensions of the self. *Congruence* refers to a match or compatibility between personality characteristics, goals, life narratives, and/or behavior (Sherman, Nave, & Funder, 2012). An example of trait-behavior congruence would occur when an extraverted individual is socializing with friends at a party. Conversely, an example of incongruence would occur when a shy individual socializes with strangers at a large social event. In an early study exploring trait-behavior congruence, Diener, Larsen, and Emmons (1984) found that certain personality traits predict the environmental situations individuals choose to enter (i.e., the choice of situations model). For example, they found that extraverted individuals seek out social situations. Importantly, congruency also leads to positive psychological outcomes. Research on trait-memory congruence found that chronically happy people had increases in self-esteem thinking

about positive memories, whereas chronically unhappy people had decreases in self-esteem thinking about positive past events (Gebauer, Broemer, Haddock, & von Hecker, 2008). Additionally, congruence among traits, goals, and life narratives was demonstrated to predict happiness (McGregor, McAdams, & Little, 2005). Finally, individuals who rated themselves high on narcissistic traits constructed nostalgic narratives that contained greater agentic (rather than communal) themes (Hart et al., 2011).

Further explorations of congruence led to the development of the semantic congruence model, which suggests that autobiographical events are perceived as more recent when trait self-perceptions are congruent with events that demonstrate this trait (Gebauer, Haddock, Broemer, & von Hecker, 2013). Research investigating this model showed that individuals who rated themselves as warm perceived an autobiographical event depicting warm behaviors as recent, even if the event occurred in the distant past. Additionally, those who rated themselves as cold also perceived an autobiographical event depicting cold behaviors as recent. The same pattern was found with competency traits and memories (Gebauer et al., 2013). This feeling of recency is an indication that participants incorporated these events into their generalized representation of self and thus experience closeness between their current self and the remembered self. This suggests that a manipulation of trait-narrative congruence (e.g., Study 2 in this proposal) might temporarily influence participants' perceptions of identity or self-consistency.

Physiological responses to personality-behavior congruence have also been demonstrated. Davis and Matthews (1996) found that cardiovascular reactivity (heart rate, blood pressure, cardiac output, total peripheral resistance, and pre-ejection period) is influenced by congruence between traits that fall under the dimensions of agency and communion, and behavior. Individuals who rated themselves as highly expressive (communion dimension)



exhibited greater systolic blood pressure reactivity when they were instructed to persuade another person (agentic task), whereas individuals who rated themselves as highly instrumental (agency dimension) showed greater diastolic blood pressure reactivity when instructed to empathize with another person (communion task). Thus, cardiovascular reactivity increased in those situations where there was incongruence between task demands and an individual's perception of self-competence.

Overall, previous research has indicated that congruence among personality characteristics, goals, and life narratives, can have specific psychological and even physiological benefits. The present studies sought to investigate how agentic and communal traits influence the way we construct and discuss our life experiences, and whether the congruence among the layers of self-knowledge leads to the experience of nostalgia that in turn increases self-esteem and results in a more optimistic outlook on the future.

### **Agentic and Communal Features of Personality**

Agentic traits (e.g., instrumental, ambitious, independent) and communal traits (e.g., expressive, cooperative, interdependent) are closely related to characteristics that are considered more stereotypically masculine and feminine (Bem, 1974; Spence, 1984; Spence & Helmreich, 1978); however, an individual can rate himself/herself higher on one trait and lower on another regardless of gender (Cross & Madson, 1997; Helgeson, 1994; Spence, 1984). Agentic traits are considered functional and desirable because they distinguish the self from others and aid individuals in attaining goals in an efficient manner. Communal traits are considered functional and desirable because they foster social connectedness through focusing on the needs of others (Abele & Wojciszke, 2007; Bakan, 1966). Both agentic and communal dimensions of the self are central to the present research because humans are motivated both to successfully achieve

their goals to benefit the self and to engage in close relationships with others to benefit others (Abele & Wojciszke, 2007; Bakan, 1966).

Previous research has identified relationships between agentic traits and behaviors and communal traits and behaviors. For example, in a longitudinal study Abele (2003) demonstrated that high ratings on agentic traits predicted a greater likelihood of career success (e.g., income, professional status, perception of success) and high ratings on communal traits predicted more involvement in family roles (e.g., living with a spouse, desire to one day have children).

Additionally, recent research that examined relationships between one's personality traits and the content of one's life narratives found that individuals who rated themselves high on communal traits focused their life narratives on relationships, whereas individuals who rated themselves high on agentic traits focused their life narratives on personal achievements (Austin & Costabile, 2016). This was the case even when controlling for gender.

Congruence between agentic traits and behavior has beneficial effects. For example, Nakash and Brody (2006) found that congruence between agentic personality motives and task conditions requiring agency-oriented behaviors (e.g., completing a task independently) led to more agentic content in autobiographical narratives and prompted autobiographical narratives to be generally less negative. Additionally, congruence between high ratings of communal traits (e.g., compassionate, gentle, loyal) and perceptions of greater social support from supervisors and coworkers has been shown to act as a buffer against occupational stress (Beehr, Farmer, Glazer, Gudanowski, & Nair, 2003). Furthermore, in a study where participants were asked to write about a nostalgic event from their lives, the narratives of individuals who rated themselves high on narcissistic traits (e.g., high agency, low communion) contained greater agentic themes (Hart et al., 2011).

Together, congruence between agentic and communal traits and related behaviors and cognitions appear to have a central influence on psychological well-being and autobiographical event perceptions. Given that nostalgia has been shown to have individual and social benefits, the goal of the present research was to examine if related congruent dimensions of the self (rather than incongruent dimensions) encourage positive reflections of past experiences that lead to greater well-being.

### **The Present Research**

As nostalgia has substantial benefits to the self (e.g., increases in positive affect, self-esteem, optimism, social connectedness, and meaning in life), it is important to continue to explore the specific factors that evoke it. The present studies aimed to address this by examining whether congruence between agentic/communal traits and achievement/relationship-focused life narratives led to feelings of nostalgia, which would in turn enhance self-esteem and optimism about the future. Specifically, it was predicted that individuals who rated themselves higher on agentic traits, would indicate greater nostalgia when writing achievement-focused life narratives than individuals who rated themselves low on agentic traits. The same pattern was expected for individuals who rated themselves high on communal traits, who wrote relationship-focused life narratives. In line with previous research, the relationship between nostalgia and optimism was expected to be mediated by self-esteem and positive affect (Cheung et al., 2013).

This project conducted two studies to explore these hypotheses. The first study investigated whether individuals who naturally demonstrate trait-narrative congruence would be more likely to experience feelings of nostalgia after writing an essay about a positive event in their life than would individuals whose traits and narratives were incongruent. More specifically, Study 1 consisted of a correlational study in which participants were free to write

about any positive, personally significant life event. They were asked to focus on one specific event and indicate when the event occurred, what happened, who was involved, and why it was an important event in their life. Because this study was conducted in two separate sessions, it was assumed that individuals who demonstrated congruity between traits and focus of life narratives in the study would be those individuals who chronically display congruity between traits and life narratives.

The second study examined whether temporarily induced congruence would have similar effects on participants' feelings of nostalgia, self-esteem, and optimism. For Study 2, participants were instructed to write their personal life event with the experimenter manipulating whether the focus was on a personal achievement or an interpersonal relationship. It was hypothesized that congruence between an individual's traits and narrative content would predict nostalgia. Specifically, individuals who rated themselves high on agentic traits and who were assigned to write about an achievement, were expected to be more likely to experience nostalgia than those who rated themselves lower on agentic traits. Additionally, it was expected that individuals who rated themselves high on communal traits *and* who were instructed to write about an interpersonal relationship would experience greater nostalgia than those who rated themselves lower on communal traits.

To replicate work conducted by Cheung et al. (2013), both Study 1 and Study 2 examined self-esteem and positive affect as potential mediators of nostalgia and optimism. In their first study, Cheung et al. (2013) demonstrated that nostalgia induced with narratives was related to optimism via positive affect. In a second study, these researchers showed that nostalgia induced with music was related to optimism via self-esteem. As the present study used narratives, it was hypothesized that both positive affect and self-esteem would mediate the relationship between

nostalgia and optimism. It should be noted that IRB approval was obtained prior to the initiation of this research (see Appendix A).

## CHAPTER 3

## STUDY 1

**Overview**

Study 1 examined whether natural congruence of traits and life narrative focus would lead to feelings of nostalgia. For Study 1, participants were asked to write about a previous life event that was positive. It was hypothesized that congruence between an individual's traits and narrative focus would lead to nostalgia. It was expected that for individuals who focused their narratives on personal achievements, individuals who rated themselves high on agentic traits would be more likely to experience nostalgia than those who rated themselves low on agentic traits. Additionally, it was expected that for individuals who focused their narratives on close relationships, those who rated themselves high on communal traits would experience greater nostalgia than those who rated themselves low on communal traits. Finally, it was expected that self-esteem and positive affect would mediate the relationship between nostalgia and optimism.

**Power Analysis**

To estimate the required sample size, a power analysis was performed using G\*Power (Faul, Erdfelder, Lang, & Buchner, 2007). Previous work has demonstrated mostly small effect sizes regarding the relationships between trait-goal congruence, trait-life narrative congruence, and positive psychological outcomes (e.g., McGregor et al., 2006). A total sample size required to detect an effect in a linear multiple regression analysis was calculated at an effect size of 0.06 and observed power of 0.80. Based on the results of the power analysis, a total sample of 133 participants was recommended to conduct this research. To be conservative, Study 1 recruited 162 participants.

## Method

### Participants

Participants included 162 undergraduate students from Iowa State University who received course credit for participation ( $M_{Age} = 19.12$ ;  $SD = 1.89$ ). To be eligible for this study, participants were required to be at least 18 years of age and were not to have participated in any previous life narrative studies at Iowa State University. The sample consisted of 63 males and 99 females, with the majority (82%) identifying as White/Caucasian (5.6% Asian/Pacific Islander, 3.7% African American, 3.7% Latino/Hispanic, 3.1% Other Race, 0.6% Indian, 0.6% Native American).

### Study Design

All participants completed the same measures in a correlational research design. Participants were given measures assessing agentic and communal traits, feelings of nostalgia, levels of self-esteem, positive and negative affect, and optimism about the future. Participants also completed a positive, personally significant event prompt from the Life Story Interview (McAdams, 1985). They were asked to write a story about any positive event from their past. There were few constraints on narrative content, as one of the goals was to identify the natural focus of their essays. However, the instructions indicated that their story must be positive and it must be a single event.

### Measures

**Agency and communion.** All participants indicated the degree to which a series of 16 words pertaining to agency and communion described them (Abele, Uchronski, Suitner, & Wojciszke, 2008). Two scales were constructed, each with eight items, averaging scores on agentic and communal items. Examples of agentic items ( $\alpha = .78$ ) included *Able*, *Active*, and

*Assertive*. Examples of communal items ( $\alpha = .89$ ) included *Caring*, *Helpful*, and *Loyal*.

Participants responded on a 7-point scale, 1 = *never or almost never true* to 7 = *always or almost always true*. Agency and Communion Items can be found in Appendix B.

**The Life Story Interview.** Similar to the high point prompt from the life story interview developed by McAdams (1985), each participant was asked to write about a positive, personally significant event from their life that described who they are. They were asked to focus on one specific event and indicate when the event occurred, what happened, who was involved, and why it was important. Additionally, participants rated their own essays on a 5-point scale, 1 = *strongly disagree* to 5 = *strongly agree*, for five themes of agentic and communal focus (e.g., “Please rate the degree to which the story you wrote earlier reflects the following themes: *independent achievement, self-reliance, group achievement, care for others, close relationships*”). A “Narrative Agency” scale was constructed by summing participant ratings on the “independent achievement” and “self-reliance” items,  $\alpha = .89$ . A “Narrative Communion” scale was constructed by summing participant ratings on the “care for others” and “close relationships” items,  $\alpha = .75$ . The “Group Achievement” focus item was analyzed independently as it was not clear how group achievements would be relevant to agency or communion. The Interview and follow-up questions can be found in Appendix C.

**Nostalgia.** Similar to Cheung et al. (2013), all participants were asked to indicate how nostalgic they felt after reflecting on their previous life event on a 6-point scale, 1 = *strongly disagree* to 6 = *strongly agree*. The measure of nostalgia consists of 13 items (e.g., “*Right now, I am feeling quite nostalgic,*” “*I feel both longing for the past and happiness after thinking about this event,*” “*I am feeling sentimental for the past,*” and “*I would not want to re-live this event*”) and assesses the degree to which an individual is experiencing nostalgia. All 13 items were



averaged and a reliability analysis indicated that this was a reliable measure,  $\alpha = .89$ . The Nostalgia Questionnaire can be found in Appendix D.

**Self-Esteem.** Similar to Cheung et al. (2013), a measure of state self-esteem was used to examine self-esteem after reflecting on their memory. Participants rated their self-esteem on a 5-point scale, 1 = *strongly disagree* to 5 = *strongly agree* and the measure consists of four items with the stem, “*After thinking about this event*” added before each (e.g., “*I feel good about myself*,” “*I like myself better*,” “*I like myself more*,” and “*I have many positive qualities*”). All four items were averaged and a reliability analysis indicated that this was a reliable measure  $\alpha = .86$ . The Self-Esteem Questions can be found in Appendix E.

**Optimism.** Similar to Cheung et al. (2013), all participants were asked to indicate their level of optimism for the future on a 6-point scale, 1 = *strongly disagree* to 6 = *strongly agree*. The measure consists of seven items total (e.g., “*This event makes me feel ready to take on new challenges*,” and “*This event makes me feel optimistic about my future*) to assess optimism experienced after writing about the event. Within the seven items, the measure also included two items to assess optimism across agentic and communal domains. Specific items were: “*This event makes me feel optimistic about my future achievements*,” and “*This event makes me feel optimistic about my future relationships*.” All items were averaged and this measure had good reliability,  $\alpha = .90$ . The Optimism Questionnaire can be found in Appendix F.

**Positive and negative affect.** All participants completed the 20-item Positive and Negative Affective Schedule (PANAS), with 10 items assessing positive affect and 10 items assessing negative affect (Watson, Clark, & Tellegen, 1988). Similar to Cheung et al. (2013), the stem “*Thinking about this event makes me feel*” was added to each item and participants rated the extent to which they felt each emotion about the event on a 5-point scale, 1 = *very*

*slightly or not at all* to 5 = *extremely*. Examples of positive affect items include *attentive*, *interested*, and *alert*. Examples of negative affect items include *distressed*, *upset*, and *hostile*. The positive affect items were summed to create a total positive affect score and a reliability analysis indicated that this scale had good reliability,  $\alpha = .85$ . The negative affect items were summed to create a total negative affect score and a reliability analysis indicated that this scale also had good reliability,  $\alpha = .83$ . The PANAS can be found in Appendix G.

**Demographics.** Basic demographic information was collected from each participant, such as age, gender, ethnicity, first language learned, and language spoken at home. The Demographics Questionnaire can be found in Appendix H.

### **Procedure**

Participants completed measures for the first part of the two-part study online using Qualtrics software (Qualtrics, Provo, UT). After first completing an informed consent document, participants completed demographic information (see Appendix H), as well as one measure assessing agentic and communal traits (see Appendix B). Participants were then asked to come to the laboratory at a separate time for the second part of the study. The day before the laboratory session, participants were emailed and told that they would be writing about a positive life event the next day. The purpose of letting participants know ahead of time what they were going to write about was to give them enough time to reflect on their life experiences. This allowed participants to spend most of their time at the lab writing their story. At the laboratory session, participants completed all measures on Qualtrics. They first completed a positive, personally significant life event prompt from The Life Story Interview that included follow-up questions assessing narrative focus (see Appendix C), followed in order by measures assessing nostalgia, self-esteem, optimism, and affect (see Appendices D, E, F, and G). For the life event

prompt, they were instructed to write at least two paragraphs detailing a positive, personally significant event from their life. They were told that this event could be from any time in their life, but that it had to be one specific event and not a general time period. They were given 30 minutes to write their story. After all measures were completed, the participants were thanked for their participation and debriefed. The average number of days in between the completion of part 1 and part 2 of the study was 40.1.

## Results

### Analyses Overview

The first goal of the present study was to investigate whether congruence between personality characteristics and life narrative focus would be related to of the experience of nostalgia. The second goal was to examine self-esteem and positive affect as potential mediators of nostalgia and optimism.

**Narrative focus coding.** To determine narrative focus, two research assistants coded each narrative on a 5-point scale that indicated whether the focus was on a relationship, an achievement, or neither. For example, a narrative that had a primary focus on relationships was coded a 1, whereas a narrative that had a primary focus on achievements was coded a 5. If the focus was on neither, the narrative would be coded a 3. If the focus was primarily on relationships, but had elements of an achievement, the narrative was coded a 2. If the focus was primarily on achievement, but had elements of relationships, the narrative was coded a 4. Putting both achievements and relationships on one scale provided an opportunity to identify the central focus of the essay. Both research assistants coded each narrative independently and their scores were averaged. An interrater reliability analysis indicated a moderate level of agreement,  $\kappa = .57$ . However, a Spearman's rho revealed a statistically significant relationship between

coders,  $r_s(128) = .86, p < .01$ . For the purpose of differentiating between narratives that were coded objectively and participant ratings of narrative focus, objective ratings will be referred to as “Narrative Focus.”

**Participant narrative focus ratings.** As stated earlier, participant ratings of achievement narrative focus will be referred to as “Narrative Agency” and participant ratings of relationship narrative focus will be referred to as “Narrative Communion.” The “Narrative Agency” scale was constructed by summing participant ratings on the “independent achievement” and “self-reliance” items. The “Narrative Communion” scale was constructed by summing participant ratings on the “care for others” and “close relationships” items. Participant ratings of narrative focus on the “Group Achievement” item was analyzed independently and will also be included in these analyses.

**Congruence analyses.** A moderated regression analysis was performed to test trait-narrative congruence, specifically whether the interaction of traits and narrative focus predicted nostalgia. Agentic and communal traits were tested in separate models because they are highly correlated with each other and there were no three-way interaction predictions in this study. In all analyses, gender was controlled for, as agentic and communal traits are related to gender stereotypes (Bem, 1974). Affect was not included as a control variable in this analysis as the PANAS was completed after the life narrative prompt and the measure of nostalgia during the study session.

**Path analysis.** A mediational analysis (Preacher & Hayes, 2004) was also performed to examine the relationship between nostalgia, self-esteem, positive affect, and optimism. Replicating Cheung et al. (2013), it was predicted that the relationship between nostalgia and optimism would be mediated by self-esteem and positive affect.

## Descriptive Data

Descriptive statistics for all independent and dependent variables are provided in Table 1. Participants overall rated themselves slightly higher on communal traits ( $M = 5.94$ ,  $SD = .86$ ) than on agentic traits ( $M = 5.45$ ,  $SD = .75$ ). The average Narrative Focus score ( $M = 3.003$ ,  $SD = 1.53$ ) fell just over the middle of the scale indicating that in general, participants focused more on achievements than relationships in their narratives. However, a paired-samples t-test showed that Narrative Communion scores ( $M = 8.15$ ,  $SD = 2.02$ ) were significantly higher than Narrative Agency scores ( $M = 7.23$ ,  $SD = 2.44$ ),  $t(159) = 3.40$ ,  $p = .001$ ,  $d = .27$ , indicating that participants rated their own narratives as highly focused on close relationships. Additionally, participants rated their narratives as highly nostalgic, and indicated high levels of self-esteem and optimism. A correlational analysis was also conducted to examine relationships among variables (see Table 2).

Table 1.  
*Descriptives for Study 1 Predictor and Outcome Variables*

Measure	<i>n</i>	<i>M</i>	<i>SD</i>	$\alpha$	Range	
					Potential	Actual
Agency	162	5.45	0.75	.78	1-7	2.38-7.00
Communion	162	5.94	0.86	.89	1-7	2.25-7.00
Narrative Focus	162	3.003	1.53	-	1-5	1.00-5.00
Narrative Agency	160	7.23	2.44	.89	2-10	2.00-10.00
Narrative Communion	160	8.15	2.02	.75	2-10	2.00-10.00
Group Achievement	160	3.46	1.30	-	1-5	1.00-5.00
Nostalgia	162	4.76	0.82	.89	1-6	2.08-6.00
Self-Esteem	162	3.79	0.61	.86	1-5	2.50-5.00
Optimism	162	4.72	0.80	.90	1-6	2.29-5.86
Positive Affect	159	42.57	8.04	.85	10-60	21.00-59.00

Table 2.

*Correlations between Study 1 Predictor, Moderator, Mediator, and Outcome Variables*

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Agency	1.00									
2. Communion	.55**	1.00								
3. Gender	-.19*	-.33**	1.00							
4. Narrative Focus	.12	.02	.16*	1.00						
5. Narrative Agency	.25**	.21**	-.15	.45**	1.00					
6. Narrative Communion	.04	.02	-.17*	-.52**	-.16*	1.00				
7. Group Achievement	.06	.04	.08	.09	-.03	.33**	1.00			
8. Nostalgia	.14	.24**	-.24**	-.05	.11	.18*	.19*	1.00		
9. Self-Esteem	.31**	.23**	-.20*	.18*	.28**	.12	.18*	.45**	1.00	
10. Optimism	.40**	.37**	-.20*	.11	.39**	.18*	.18*	.35**	.58**	1.00
11. Positive Affect	.56**	.39**	-.15	.23**	.34**	.09	.10	.33**	.48**	.62**

Note. For Gender, females coded 0, males coded 1; \* $p < .05$ ; \*\* $p < .01$

### Trait-Narrative Congruence

**Narrative focus.** A moderated regression analysis was performed to test the prediction that for individuals who rated themselves high on agentic traits, those who wrote achievement-focused narratives would rate their previous life event as more nostalgic than those who rated themselves low on agentic traits. Agentic traits, Narrative Focus, and gender were centered and entered on Step 1, with the interaction term of agency and Narrative Focus entered on Step 2. Contrary to hypothesis, agentic trait-narrative congruence did not predict nostalgia,  $b = -.04$ ,  $t(157) = -.46$ ,  $p = .65$ . At this step, the only significant predictor of nostalgia was gender, with women reporting greater nostalgia than men  $b = -.22$ ,  $t(157) = -2.77$ ,  $p = .01$ . These results can be found in Table 3.

Table 3.

*Study 1 Interaction: Agency X Narrative Focus Predicting Nostalgia (N = 162)*

Predictor	<i>b</i>	<i>se</i>	<i>df</i>	<i>t</i>	<i>p</i>
Step 1					
Agency	0.10	0.06	158	1.25	0.21
Narrative Focus	-0.03	0.07	158	-0.39	0.70
Gender	-0.22	0.13	158	-2.75	0.01
Step 2					
Agency	0.11	0.07	157	1.33	0.19
Narrative Focus	-0.02	0.07	157	-0.31	0.76
Gender	-0.22	0.13	157	-2.77	0.01
Agency*Narrative Focus	-0.04	0.07	157	-0.46	0.65

A second moderated regression analysis was performed to test the prediction that for those individuals who rated themselves high on communal traits, those who wrote relationship-focused narratives would rate their previous life event as more nostalgic than those who rated themselves low on communal traits. Communal traits, Narrative Focus, and gender were

centered and entered on Step 1, with the communal trait-narrative focus interaction term entered on Step 2. Contrary to hypothesis, communal trait-narrative congruence did not predict higher levels of nostalgia,  $b = .06$ ,  $t(157) = .80$ ,  $p = .42$ . However, communal traits  $b = .18$ ,  $t(157) = 2.21$ ,  $p = .03$  and gender  $b = -.17$ ,  $t(157) = -2.02$ ,  $p = .04$  predicted nostalgia. Individuals who rated themselves high on communion and women reported greater nostalgia. Narrative Focus was not a significant predictor of nostalgia, ( $b = -.04$ ,  $p = .63$ ). These results can be found in Table 4.

Table 4.

*Study 1 Interaction: Communion X Narrative Focus Predicting Nostalgia (N = 162)*

Predictor	<i>b</i>	<i>se</i>	<i>df</i>	<i>t</i>	<i>p</i>
Step 1					
Communion	0.18	0.06	158	2.29	0.02
Narrative Focus	-0.03	0.07	158	-0.39	0.69
Gender	-0.18	0.13	158	-2.17	0.03
Step 2					
Communion	0.18	0.06	157	2.21	0.03
Narrative Focus	-0.04	0.07	157	-0.48	0.63
Gender	-0.17	0.14	157	-2.02	0.04
Communion*Narrative Focus	0.06	0.07	157	0.80	0.42

**Narrative agency.** To explore whether congruence between agentic traits and Narrative Agency (i.e., participant ratings of achievement focus of their own narratives) would predict nostalgia, an additional moderated regression analysis was performed. Agentic traits, Narrative Agency, and gender were centered and entered on Step 1, with the interaction term of agency and Narrative Agency entered on Step 2. Similar to the results above, congruence between agentic traits and participant ratings of achievement focus did not predict nostalgia,  $b = -.04$ ,  $t(155) = -.46$ ,  $p = .64$ . Gender was a significant predictor of nostalgia at this second step,  $b = -.24$ ,  $t(155) = -2.97$ ,  $p < .01$ . See Table 5 for these results.



Table 5.

*Study 1 Interaction: Agency X Narrative Agency Predicting Nostalgia (N = 160)*

Predictor	<i>b</i>	<i>se</i>	<i>df</i>	<i>t</i>	<i>p</i>
Step 1					
Agency	0.07	0.07	156	0.89	0.37
Narrative Agency	0.06	0.06	156	0.78	0.44
Gender	-0.23	0.13	156	-2.94	0.004
Step 2					
Agency	0.08	0.07	155	0.96	0.34
Narrative Agency	0.05	0.06	155	0.68	0.50
Gender	-0.24	0.13	155	-2.97	0.003
Agency*Narrative Agency	-0.04	0.07	155	-0.46	0.64

**Narrative communion.** To explore whether congruence between communal traits and Narrative Communion (i.e., participant ratings of relationship focus of their own narratives) predicted nostalgia, an additional moderated regression analysis was performed. Communal traits, Narrative Communion, and gender were centered and entered on Step 1, with the interaction term of communion and Narrative Communion entered on Step 2. In this model, the interaction of communal traits and Narrative Communion significantly predicted nostalgia,  $b = -.21$ ,  $t(155) = -2.67$ ,  $p = .01$ . At this step, communal traits  $b = .24$ ,  $t(155) = 2.96$ ,  $p < .01$  and Narrative Communion  $b = .19$ ,  $SE = .07$ ,  $t(157) = 2.53$ ,  $p = .01$  also predicted nostalgia, however, gender did not ( $b = -.13$ ,  $p = .11$ ). To illustrate this interaction, it was plotted at one standard deviation above and below the mean of both variables (See Figure 1).

A simple slope analysis revealed that communion was positively related to nostalgia for low levels of Narrative Communion,  $b = .43$ ,  $t(155) = 3.64$ ,  $p < .001$ . However, there was not a significant relationship between communion and nostalgia for high levels of Narrative Communion,  $b = .01$ ,  $t(155) = .06$ ,  $p = .95$ . Overall, there were no differences in feelings of nostalgia between individuals with high and low communal traits for narratives with a high

relationship focus. However, individuals who rated themselves high on communal traits rated greater feelings of nostalgia for narratives lower in relationship focus than individuals who rated themselves lower on communal traits. See Figure 1 and Table 6 for these results.

### **Mediation Analysis**

Following the procedures recommended by Preacher and Hayes (2004), a mediational analysis was conducted to replicate Cheung et al. (2013) to explore self-esteem and positive affect as potential mediators of the relationship between nostalgia and optimism. As expected, nostalgia led to self-esteem ( $b = .34, SE = .05, t(157) = 6.30, p < .001$ ). Nostalgia also led to positive affect ( $b = 3.25, SE = .74, t(157) = 4.40, p < .001$ ). A bootstrapping analysis (Hayes, 2012; Model 4; 10,000 resamples) was performed with self-esteem and positive affect included as parallel mediators. With both self-esteem and positive affect in the model, the direct effect of nostalgia on optimism was not significant,  $M_{\text{direct effect}} = .04, SE = .06, t(157) = 4.402, p = .56$ . The indirect effect of nostalgia on optimism via self-esteem was significant,  $M_{\text{indirect effect}} = .29, SE = .03, 95\% CI = [.09, .23]$ . The indirect effect of nostalgia on optimism via positive affect was also significant,  $M_{\text{indirect effect}} = .14, SE = .04, 95\% CI = [.08, .22]$ . Thus, both self-esteem and positive affect mediated the relationship between nostalgia and optimism. See Figure 2 and Table 7 for these results.

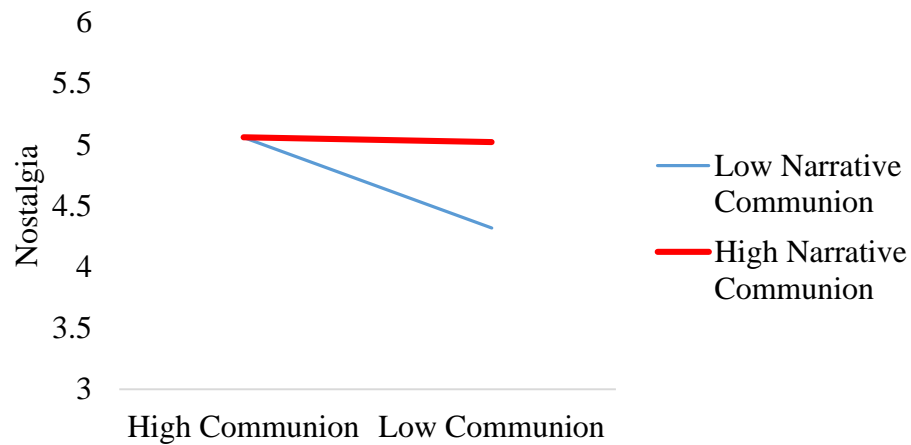


Figure 1. Interaction of communal traits and narrative communion on nostalgia. Values plotted at +/- 1 SD of the mean of each variable.

Table 6.  
Study 1 Interaction: Communion X Narrative Communion Predicting Nostalgia (N = 160)

Predictor	<i>b</i>	<i>se</i>	<i>df</i>	<i>t</i>	$\Delta R^2$	<i>p</i>
Step 1					0.12	0.00
Communion	0.20	0.06	156	2.46		0.01
Narrative Communion	0.15	0.06	156	1.92		0.06
Gender	-0.16	0.13	156	-2.03		0.04
Step 2					0.04	0.01
Communion	0.24	0.06	155	2.96		0.00
Narrative Focus	0.19	0.06	155	2.53		0.01
Gender	-0.13	0.13	155	-1.63		0.11
Communion*Narrative Communion	-0.21	0.07	155	-2.67		0.01

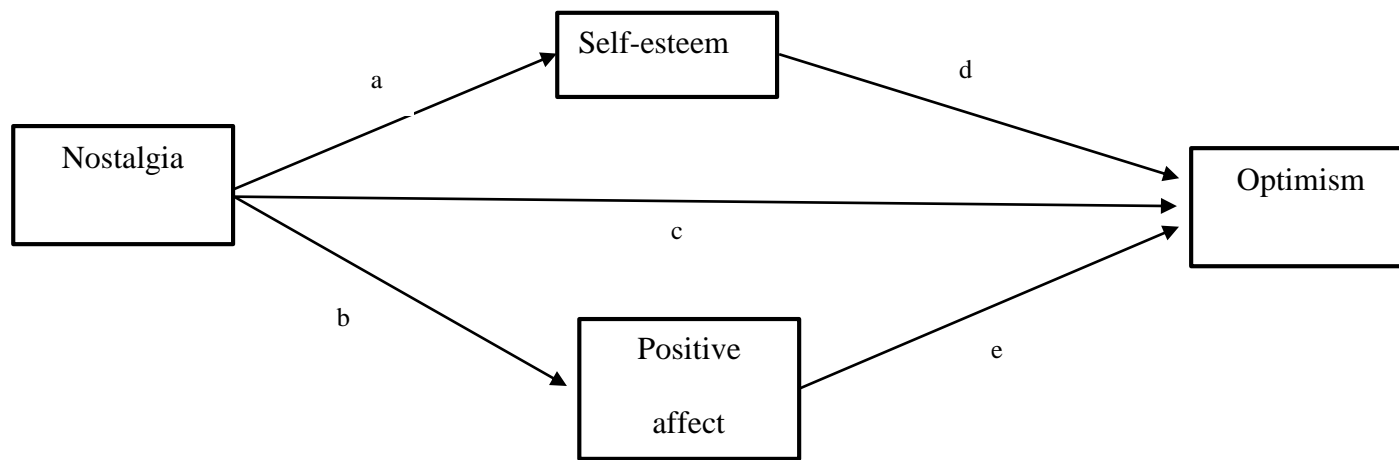


Figure 2. Relationships between nostalgia, self-esteem, positive affect, and optimism.

Table 7.

Tests of Direct and Indirect Effects in the Mediation Model of Study 1 (N = 162)

Effect	Figure 1 path	Coeff.	SE	95% CI
Direct effects				
Nostalgia → Self-esteem	a	.337**	.054	[.232, .443]
Nostalgia → Positive affect	b	3.247**	.737	[1.790, 4.703]
Nostalgia → Optimism	c	.037	.063	[-.089, .162]
Self-esteem → Optimism	d	.447**	.091	[.267, .627]
Positive affect → Optimism	e	.044**	.007	[.030, .057]
Indirect effect: Nostalgia → Optimism				
Total		.292**	.048	[.205, .394]
via Self-esteem	a x d	.151**	.034	[.090, .227]
via Positive affect	a x e	.142**	.037	[.079, .222]

Note. Coeff. = unstandardized path coefficient; 95% CI = 95% bootstrap confidence interval; \*\* $p < .001$

## Discussion

The first goal of Study 1 was to establish a link between trait-narrative congruence and feelings of nostalgia. It was predicted that among individuals who rated themselves high on agentic traits, those who naturally wrote achievement-oriented life narratives would experience greater nostalgia than those who were low on agentic traits. These predictions were not supported. Additionally, it was predicted that among individuals who rated themselves high on communal traits, those who naturally wrote relationship-oriented life narratives would experience greater nostalgia than individuals who rated themselves low on communal traits. Although individuals who rated themselves high on communal traits did rate relationship-focused (Narrative Communion) narratives as highly nostalgic, they also rated narratives with a low relationship focus as highly nostalgic. Additionally, individuals who rated themselves low on communal traits rated relationship-focused narratives (Narrative Communion) as highly nostalgic, which was contrary to predictions. Overall, there were no significant relationships between trait-narrative congruence and feelings of nostalgia.

It is possible that the methodology used in this study led to the predictions not being supported. Participants were only asked to write about a positive event and objective ratings of participant narratives suggested that many were writing about achievements. This suggests that the prompt itself may have inadvertently encouraged achievement-related events. This issue was addressed in Study 2 by asking participants to write specifically about an achievement- or a relationship-focused event.

Although there were no significant findings with regard to trait-narrative congruence, other interesting patterns with nostalgia emerged. For example, individuals who rated themselves high on communal traits were more likely to indicate nostalgia than individuals low

on communal traits. Additionally, consistent with previous literature (Sedikides et al., 2015), participants who wrote about an event that they deemed as focused on close relationships rated those life events as highly nostalgic. Finally, the degree to which participants rated their narratives as being focused on a *group* achievement predicted nostalgia. Nostalgia was not correlated, however, with degree to which participants wrote about an *individual* achievement. These results provide support for previous research suggesting that nostalgia is primarily a social emotion, but also provide additional evidence for the agentic component of nostalgia (Sedikides et al., 2015). More specifically, these results suggest that an achievement-oriented memory can result in feelings of nostalgia if the memory includes a social component.

Replicating Cheung et al. (2013), self-esteem and positive affect were both found to mediate the relationship between nostalgia and optimism. Nostalgia led to increased self-esteem and positive affect, which led to greater feelings of optimism about the future. Correlational analyses revealed significant relationships among participant ratings of achievement-focused narratives and self-esteem, optimism, and positive affect. There were no significant relationships, however, among participant ratings of relationship-focused narratives and self-esteem, optimism, and positive affect. Taken together, these results suggest that writing about an achievement provides a boost to the self-concept outside of nostalgia. Conversely, writing about a relationship, is more likely to result in feelings of nostalgia, and results from the mediational analyses indicate that nostalgia leads to greater self-esteem, positive affect, and optimism.

## CHAPTER 4 STUDY 2

### **Overview**

To address the methodological issues of narrative focus in Study 1, Study 2 manipulated narrative focus and asked participants to write about a previous life event that focused on an achievement or a relationship. Study 2 examined whether temporarily induced congruence of traits and life narrative focus would lead to feelings of nostalgia. It was hypothesized that congruence between an individual's traits and narrative focus would lead to feelings of nostalgia. In the achievement focus condition, it was expected that individuals who rated themselves high on agentic traits would be more likely to experience nostalgia than those who rated themselves low on agentic traits. Additionally, it was expected that for individuals in the relationship focus condition, those who rated themselves high on communal traits would experience greater nostalgia than those who rated themselves low on communal traits. Finally, it was expected that self-esteem and positive affect would mediate the relationship between nostalgia and optimism.

### **Power Analysis**

To estimate the required sample size, a power analysis was performed using G\*Power (Faul, Erdfelder, Lang, & Buchner, 2007). Previous work has demonstrated mostly small effect sizes regarding the relationships between trait-goal congruence, trait-life narrative congruence, and positive psychological outcomes (McGregor et al., 2006). A total sample size required to detect an effect in a linear multiple regression analysis was calculated at an effect size of 0.06 and observed power of 0.80. Based on the results of the power analysis, a total sample of 133 participants was recommended to conduct this research. Because Study 2 included a mixed

design with two experimental conditions, an additional power analysis was calculated using G\*Power to determine a total sample size required to detect an effect in an ANCOVA analysis at an effect size of 0.25 and observed power of 0.80 (Faul, Erdfelder, Lang, & Buchner, 2007). Based on the results of the power analysis, a total sample of 128 participants was recommended to conduct this research. Study 2 recruited 128 participants.

## Method

### Participants

Participants included 128 undergraduate students from Iowa State University who received course credit for participation ( $M_{Age} = 19.3$ ;  $SD = 2.05$ ). To be eligible for this study, participants were required to be at least 18 years of age and were not to have participated in any previous life narrative studies at Iowa State University. The sample consisted of 41 males and 87 females, with the majority (77.3%) identifying as White/Caucasian (7.8% Asian/Pacific Islander, 6.3 % African American, 5.5% Latino/Hispanic, 1.6% Other Race, 0.8% Native American).

### Study Design

A mixed model design was conducted with participants randomized to one of two conditions: 1) achievement narrative focus condition or 2) relationship narrative focus condition. All participants completed the same trait, nostalgia, self-esteem, optimism, and positive affect measures from Study 1 in Study 2.

### Measures

**Agency and communion.** Identical to Study 1, all participants indicated the degree to which a series of 16 words pertaining to agency and communion described them (Abele, Uchronski, Suitner, & Wojciszke, 2008). Two scales were constructed, each with eight items,



averaging scores on agentic and communal items. Examples of agentic items ( $\alpha = .75$ ) included *Able*, *Active*, and *Assertive*. Examples of communal items ( $\alpha = .83$ ) included *Caring*, *Helpful*, and *Loyal*. Participants responded on a 7-point scale, 1 = *never or almost never true* to 7 = *always or almost always true*. See Appendix B.

**Manipulation of narrative focus.** Adapting procedures from McAdams (1985), participants were randomized to write about a positive, personally significant achievement event or a positive, personally significant relationship event from their lives. They were asked to focus on one specific event and indicate when the event occurred, what happened, who was involved, and why it was important. Participants randomly assigned to the achievement life narrative focus condition (see Appendix I) were instructed to write about a positive, personally significant event in their lives where they achieved or accomplished something of value. Instructions were similar to the prompt from Study 1, but in addition to asking participants for a positive, personally significant event, they were encouraged to focus the narrative on an achievement from their past. Conversely, participants randomly assigned to the relationship life narrative focus condition (see Appendix J), were instructed to write about a positive, personally significant event in their lives that involved a close relationship. To avoid having participants write about achievement-related event that happened to involve close relationships, they were prompted to think about an event that focused around quality time with close others and to discuss why this relationship event was a peak experience in their life. These close relationships could include friends, family, or romantic partners. The complete instructions for the Achievement Life Story prompt can be found in Appendix H and the complete instructions for the Relationship Life Story prompt can be found in Appendix I. Additionally, participants in both conditions rated their own essays on a 5-point scale, 1 = *strongly disagree* to 5 = *strongly agree*, for five themes

of agentic and communal focus (e.g., “Please rate the degree to which the story you wrote earlier reflects the following themes: independent achievement, self-reliance, group achievement, care for others, close relationships”). A “Narrative Agency” scale was constructed by summing participant ratings on the “independent achievement” and “self-reliance” items,  $\alpha = .85$ . A “Narrative Communion” scale was constructed by summing participant ratings on the “care for others” and “close relationships” items,  $\alpha = .86$ . The “Group Achievement” focus item was analyzed independently. The life narrative prompts and follow-up questions can be found in Appendices I and J, respectively.

**Nostalgia.** Identical to Study 1 and similar to Cheung et al. (2013), all participants were asked to indicate how nostalgic they felt after reflecting on their previous life event on a 6-point scale, 1 = *strongly disagree* to 6 = *strongly agree*. The measure of nostalgia consists of 13 items that assesses the degree to which an individual is experiencing nostalgia. A reliability analysis indicated that this was a reliable measure,  $\alpha = .91$ . The Nostalgia Questionnaire can be found in Appendix D.

**Self-Esteem.** Identical to Study 1 and similar to Cheung et al. (2013), a measure of state self-esteem was used to examine participant levels of self-esteem after reflecting on their memory. Participants rated their self-esteem on a 5-point scale, 1 = *strongly disagree* to 5 = *strongly agree* and the measure consists of four items,  $\alpha = .86$ . The Self-Esteem Questions can be found in Appendix E.

**Optimism.** Identical to Study 1 and similar to Cheung et al. (2013), all participants were asked to indicate their level of optimism on a 6-point scale, 1 = *strongly disagree* to 6 = *strongly agree*. The measure consists of seven items,  $\alpha = .90$ . The Optimism Questionnaire can be found in Appendix F.

**Positive and negative affect.** Identical to Study 1, all participants completed the 20-item Positive and Negative Affective Schedule (PANAS) on a 5-point scale, with 10 items assessing positive affect and 10 items assessing negative affect (Watson, Clark, & Tellegen, 1988). The positive affect scale had good reliability,  $\alpha = .90$ , as did the negative affect scale,  $\alpha = .87$ . The PANAS measure can be found in Appendix G.

**Demographics.** Basic demographic information was collected from each participant, such as age, gender, ethnicity, first language learned, and language spoken at home. See Appendix H.

### **Procedure**

Participants completed measures for the first part of the two-part study online using Qualtrics software (Qualtrics, Provo, UT). After first completing an informed consent document, participants completed demographic information (see Appendix H), as well as one measure assessing agentic and communal traits (see Appendix B). Participants were then asked to come to the laboratory at a separate time for the second part of the study. The day before the laboratory session, participants were randomized to either the achievement or relationship condition and were notified by email that they would be writing a story about a previous event that focused on an achievement or a previous event that focused on a relationship. Providing this information prior to the laboratory session gave participants the opportunity to reflect on their previous life experiences before the session began such that they could select a relevant and meaningful event. At the laboratory session, participants completed all measures on Qualtrics. Participants randomly assigned to the achievement life narrative focus condition were instructed to write one to two paragraphs detailing a positive, personally significant event from their life involving an achievement. Participants randomly assigned to the relationship life narrative focus

condition were instructed to write at least two paragraphs detailing a positive, personally significant event from their life that revolved around a close relationship. Participants were given 30 minutes to write their story. Finally, following the narrative prompt and follow-up questions assessing narrative focus (see Appendices I and J), participants completed in order measures assessing nostalgia, self-esteem, optimism, and affect (see Appendices D, E, F, and G). After the final measures were complete, the participants were thanked for their time and debriefed. The average number of days in between the completion of part 1 and part 2 of the study was 27.2.

## Results

### Primary Analyses

The goal of the present study was to investigate whether assigning participants to write about either an achievement- or relationship-focused previous life event would lead them to experience nostalgia if the focus of that event (e.g., achievement or relationship focus) was congruent (as opposed to incongruent) with their traits (e.g., agentic or communal). It was expected that agentic traits would predict nostalgia in the achievement-focus narrative condition, whereas communal traits would predict nostalgia for participants who were randomized to the relationship condition.

Similar to Study 1, narrative focus was coded on a 5-point scale, where relationship-focused narratives were coded a 1, achievement-focused narratives were coded a 5, and a focus on neither was coded a 3. An interrater reliability analysis indicated a higher level of agreement than in Study 1,  $\kappa = .77$ . Additionally, a Spearman's rho revealed a statistically significant relationship between coders,  $r_s(128) = .95, p < .01$ . Therefore, after a manipulation check, a moderated regression analysis was performed to test trait-narrative congruence, specifically

whether the interaction of traits and narrative focus condition predicted nostalgia, controlling for gender. Affect was not included as a control variable in this analysis as the PANAS was included after the life narrative prompt and the measure of nostalgia during the study session. Additionally, a mediational analysis (Preacher & Hayes, 2004) was performed to replicate Study 1, examining self-esteem and positive affect as mediators of nostalgia and optimism. Data were analyzed using the statistical software SPSS.

### **Manipulation Check**

Participant ratings and experimenter-coded ratings of narrative focus (i.e., Narrative Agency, Narrative Communion, and Narrative Focus) were used as a manipulation check. A one-way ANOVA showed that there was a main effect of condition on participant narrative focus ratings of achievements (Narrative Agency)  $F(1, 121) = 47.39, p < .001$  and relationships (Narrative Communion)  $F(1, 121) = 42.28, p < .001$  (see Table 5). Participants rated their narratives higher on achievements in the achievement condition ( $M = 8.12, SD = 1.80$ ) than in the relationship condition ( $M = 5.69, SD = 2.12$ ). Conversely, participants rated their narratives higher on relationships in the relationship condition ( $M = 9.07, SD = 1.31$ ) than in the achievement condition ( $M = 6.81, SD = 2.33$ ). Additionally, there was a significant main effect of condition on the coded focus of narratives (Narrative Focus)  $F(1, 126) = 270.93, p < .001$  with narratives in the achievement condition coded as primarily focused on achievements ( $M = 4.41, SD = 1.04$ ) and narratives in the relationship condition coded as primarily focused on relationships ( $M = 1.53, SD = .93$ ). See Table 8.

Table 8.

*Manipulation checks as a function of Essay Focus in Study 2 (N = 123)*

	Achievement Focus (n = 65)		Relationship Focus (n = 58)		$\eta^2$	Results of ANOVA	
	M	SD	M	SD		F (1,122)	p > F
Narrative Agency	8.12	1.80	5.69	2.12	0.281	47.39	< .0001
Narrative Communion	6.81	2.33	9.07	1.31	0.349	42.28	< .0001
Group Achievement	2.91	1.33	3.57	1.22	0.063	8.2	< .01
Narrative Focus	4.41	1.04	1.53	0.93	0.682	270.93	<.0001

## Descriptive Data

Descriptive statistics for all independent and dependent variables are provided in Table 9. A one-way ANOVA was performed to examine differences in nostalgia, self-esteem, optimism, and positive affect between the two narrative focus conditions. There were no significant differences in ratings of nostalgia between the two conditions. However, participant ratings of self-esteem ( $M = 3.83$ ,  $SD = .61$ ),  $F(1, 126) = 3.82$ ,  $p = .05$ , optimism ( $M = 4.88$ ,  $SD = .66$ ),  $F(1, 126) = 12.58$ ,  $p = .001$ , and positive affect ( $M = 42.22$ ,  $SD = 8.61$ ),  $F(1, 125) = 5.66$ ,  $p = .02$  were significantly higher in the achievement condition than ratings of self-esteem ( $M = 3.60$ ,  $SD = .74$ ), optimism ( $M = 4.39$ ,  $SD = .88$ ), and positive affect ( $M = 38.05$ ,  $SD = 11.02$ ) in the relationship condition. Correlations for all variables can be found in Table 10.

Table 9.

*Descriptives for Study 2 Predictor and Outcome Variables*

Measure	<i>n</i>	<i>M</i>	<i>SD</i>	$\alpha$	Range	
					Potential	Actual
Agency	128	5.31	0.80	.75	1-7	2.88-7.00
Communion	128	6.02	0.70	.83	1-7	3.00-7.00
Narrative Focus	128	2.996	1.75	-	1-5	1.00-5.00
Narrative Agency	123	6.97	2.30	.85	2-10	2.00-10.00
Narrative Communion	123	7.88	2.22	.86	2-10	2.00-10.00
Group Achievement	123	3.22	1.31	-	1-5	1.00-5.00
Nostalgia	128	4.61	0.94	.91	1-6	1.38-6.00
Self-Esteem	128	3.72	0.69	.86	1-5	1.00-5.00
Optimism	128	4.64	0.81	.90	1-6	2.00-5.86
Positive Affect	127	40.15	10.06	.90	10-60	13.00-60.00

Table 10.

*Correlations between Study 2 Predictor, Moderator, Mediator, and Outcome Variables*

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Agency	1.00									
2. Communion	.39**	1.00								
3. Gender	.07	-.03	1.00							
4. Narrative Focus	.10	.02	-.05	1.00						
5. Narrative Agency	.09	.06	-.11	.63**	1.00					
6. Narrative Communion	-.25**	.01	.10	-.59**	-.56**	1.00				
7. Group Achievement	-.04	.01	.10	-.26**	-.34**	.54**	1.00			
8. Nostalgia	.06	.20*	-.07	-.01	-.03	.22*	.29**	1.00		
9. Self-Esteem	.17	.17	.06	.18*	.13	.00	.03	.50**	1.00	
10. Optimism	.27**	.28**	-.15	.30**	.25**	-.09	.07	.40**	.59**	1.00
11. Positive Affect	.27**	.28**	-.03	.22**	.17	.04	.24	.37**	.55**	.67**

Note. For Gender, females coded 0, males coded 1; \* $p < .05$ ; \*\* $p < .01$



### Trait-Narrative Congruence

A moderated regression analysis was performed to test the prediction that individuals who rated themselves high on agentic traits would rate their previous life event as more nostalgic when they were randomly assigned to the achievement focus condition than when they were assigned to the relationship focus condition. Values for agency, condition, and gender were centered and entered on Step 1, with the interaction term of agency and condition entered on Step 2. The prediction was not supported; agentic trait-narrative congruence did not predict nostalgia,  $b = -.10$ ,  $t(123) = -.77$ ,  $p = .44$ . There were no significant main effects, all  $p$ 's > .05. These results can be found in Table 11.

Table 11.

*Study 2 Interaction: Agency X Narrative Condition Predicting Nostalgia (N = 127)*

Predictor	<i>b</i>	<i>se</i>	<i>df</i>	<i>t</i>	<i>p</i>
Step 1					
Agency	0.07	0.08	124	0.76	0.45
Narrative Condition	-0.02	0.17	124	-0.21	0.83
Gender	-0.08	0.18	124	-0.90	0.37
Step 2					
Agency	0.15	0.12	123	1.08	0.28
Narrative Condition	-0.03	0.17	123	-0.32	0.75
Gender	-0.09	0.18	123	-0.99	0.33
Agency*Narrative Condition	-0.10	0.16	123	-0.77	0.44

*Note.* For Narrative Condition, relationship focus coded 0, achievement focus coded 1

A moderated regression analysis was performed to test the prediction that individuals who rated themselves high on communal traits would rate their previous life event as more nostalgic when they were randomly assigned to the relationship focus condition than when they were assigned to the achievement focus condition. Values for communion, condition, and gender were centered and entered on Step 1, with the interaction term of communion and condition entered on Step 2. The interaction was marginally significant,  $b = -.20$ ,  $t(123) = -1.81$ ,

$p = .07$ ; high communal traits (as opposed to low communal traits) predicted greater nostalgia in the relationship focus condition. Communal traits were also a significant predictor of nostalgia,  $b = .32$ ,  $t(123) = 2.90$ ,  $p < .01$ . To illustrate the interaction, it was plotted at one standard deviation above and below the mean of both variables (See Figure 3).

A simple slopes analysis indicated that there was a significant effect of communal traits on nostalgia in the relationship condition,  $b = .43$ ,  $t(123) = 2.90$ ,  $p < .01$ , but no significant effect in the achievement condition,  $b = .002$ ,  $t(123) = -.01$ ,  $p = .99$ . Individuals who rated themselves higher on communal traits rated greater feelings of nostalgia in the relationship condition than individuals who rated themselves lower on communal traits (see Table 12).

### **Mediation Analysis**

Following the procedures recommended by Preacher and Hayes (2004), a mediational analysis was conducted to replicate Cheung et al. (2013) to explore self-esteem and positive affect as potential mediators of the relationship between nostalgia and optimism. As expected, nostalgia led to self-esteem ( $b = .36$ ,  $SE = .06$ ),  $t(125) = 6.44$ ,  $p < .001$ . Nostalgia also led to positive affect ( $b = 3.96$ ,  $SE = .88$ ),  $t(125) = 4.48$ ,  $p < .001$ . A bootstrapping analysis (Hayes, 2012; Model 4; 10,000 resamples) was performed with self-esteem and positive affect included as parallel mediators. With both self-esteem and positive affect in the model, the direct effect of nostalgia on optimism was not significant,  $M_{\text{directeffect}} = .06$ ,  $SE = .06$ ,  $t(125) = 1.019$ ,  $p = .31$ . The indirect effect of nostalgia on optimism via self-esteem was significant,  $M_{\text{indirecteffect}} = .12$ ,  $SE = .04$ , 95% CI = [.06, .23]. The indirect effect of nostalgia on optimism via positive affect was also significant,  $M_{\text{indirecteffect}} = .15$ ,  $SE = .04$ , 95% CI = [.07, .25]. Thus, both self-esteem and positive affect mediated the relationship between nostalgia and optimism. See Figure 4 and Table 13 for these results.

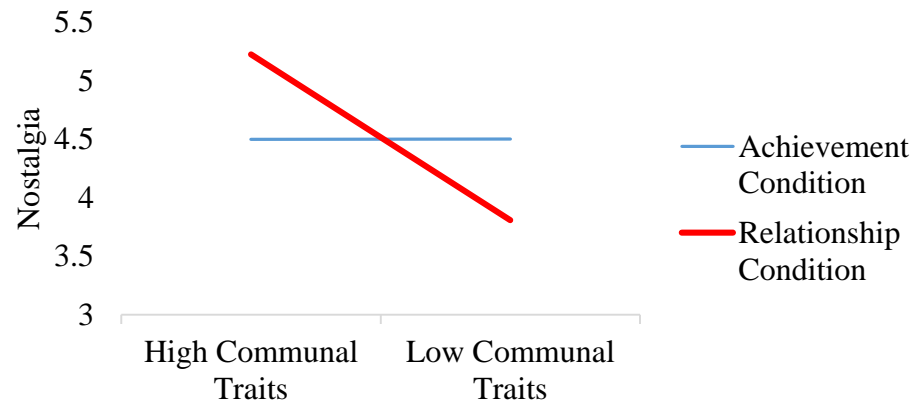


Figure 3. Interaction of communal traits and narrative focus condition on nostalgia. Values plotted at +/- 1 SD of the mean of each variable.

Table 12.

Study 2 Interaction: Communion X Narrative Condition Predicting Nostalgia (N = 127)

Predictor	<i>b</i>	<i>se</i>	<i>df</i>	<i>t</i>	$\Delta R^2$	<i>p</i>
Step 1					0.04	
Communion	0.20	0.10	124	2.25		0.03
Narrative Condition	-0.02	0.16	124	-0.27		0.78
Gender	-0.07	0.18	124	-0.81		0.42
Step 2					0.02	
Communion	0.32	0.12	123	2.90		0.00
Narrative Condition	-0.004	0.16	123	-0.05		0.96
Gender	-0.08	0.17	123	-0.95		0.35
Communion*Narrative Condition	-0.20	0.20	123	-1.81		0.07

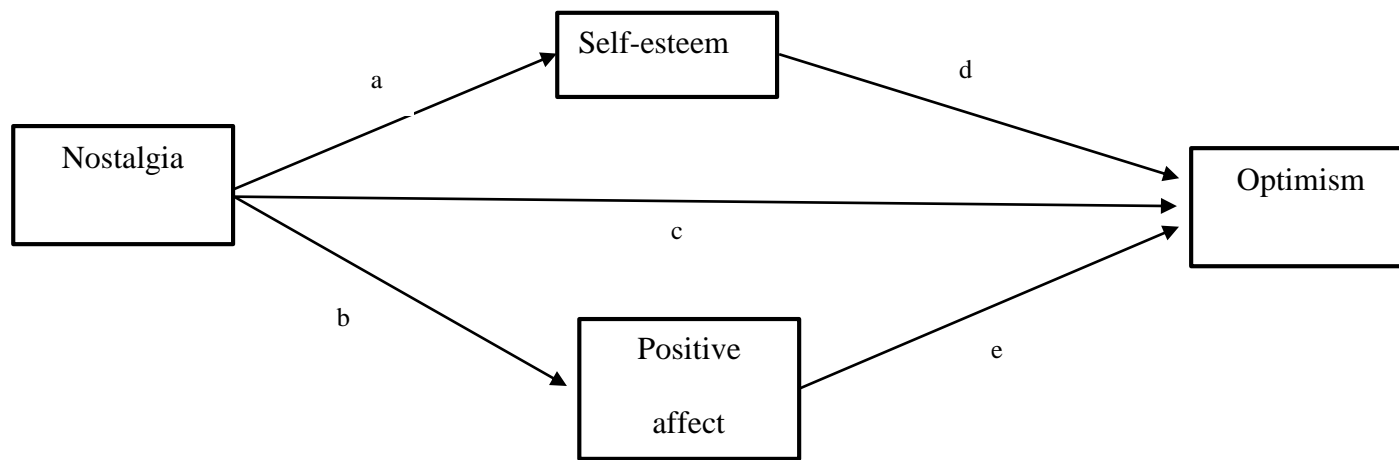


Figure 4. Relationships between nostalgia, self-esteem, positive affect, and optimism.

Table 13.

Tests of Direct and Indirect Effects in the Mediation Model of Study 2 (N = 127)

Effect	Figure 1 path	Coeff.	SE	95% CI
Direct effects				
Nostalgia → Self-esteem	a	.365**	.057	[.253, .478]
Nostalgia → Positive affect	b	3.962**	.885	[2.211, 5.714]
Nostalgia → Optimism	c	.064	.062	[-.060, .187]
Self-esteem → Optimism	d	.340**	.095	[.152, .527]
Positive affect → Optimism	e	.039**	.006	[.027, .051]
Indirect effect: Nostalgia → Optimism				
Total		.341**	.070	[.201, .480]
via Self-esteem	a x d	.124**	.043	[.056, .229]
via Positive affect	a x e	.153**	.043	[.077, .249]

Note. Coeff. = unstandardized path coefficient; 95% CI = 95% bootstrap confidence interval; \*\* $p < .001$

## Discussion

The first goal of Study 2 was to establish a link between trait-narrative congruence and feelings of nostalgia. Specifically, it was predicted that individuals who rated themselves high on agentic traits would rate their previous life event as more nostalgic when they were randomly assigned to the achievement focus condition than when they were assigned to the relationship focus condition. Additionally, it was predicted that individuals who rated themselves high on communal traits would rate their previous life event as more nostalgic when they were randomly assigned to the relationship focus condition than when they were assigned to the achievement focus condition. Participant ratings of narrative focus (e.g., independent achievement, self-reliance, group achievement, care for others, and close relationships) suggested that narrative focus was successfully manipulated in this study. Results indicated that agency trait-focus congruence did not predict nostalgia; however, the communal trait-narrative focus congruence hypothesis predicted nostalgia. Specifically, individuals who were asked to write a relationship-focused narrative and who rated themselves high on communal traits experienced higher levels of nostalgia than individuals who rated themselves low on communal traits.

Replicating the results from Study 1, degree of communal traits predicted nostalgia. Additionally, even though there was no relationship between objectively coded narratives and nostalgia, the degree to which participants rated their own narratives as being focused on relationships predicted nostalgia. Additionally, the degree to which narratives focused on a *group* achievement predicted nostalgia. Nostalgia was not predicted by the degree to which participants wrote about an *individual* achievement. These results provide support for previous research suggesting that socially oriented memories are more likely to elicit nostalgia than memories that focus on the independent self (Sedikides et al., 2015). Additionally, consistent

with Study 1, this study provides strong evidence for a relationship between communal traits and nostalgia. Future research could examine a potential relationship between communal traits and dispositional nostalgia.

Replicating Study 1 and Cheung et al. (2013), self-esteem and positive affect were both found to mediate the relationship between nostalgia and optimism. Greater feelings of nostalgia predicted self-esteem and positive affect, which led to greater feelings of optimism about the future. Similar to Study 1, correlational analyses revealed significant relationships between participant ratings of achievement-focused narratives (i.e., self-reliance focus) and self-esteem, optimism, and positive affect. There were no significant relationships, however, between participant ratings of relationship-focused narratives and self-esteem, optimism, and positive affect. These results add to the findings of Study 1 suggesting that writing about a previous independent achievement provides a boost to the self outside of nostalgia. Conversely, writing about a relationship, is more likely to result in feelings of nostalgia, which in turn leads to greater self-esteem, positive affect, and optimism.

## CHAPTER 5

### GENERAL DISCUSSION

The primary goal of this research was to investigate the influence of trait-narrative focus congruence on nostalgia. Both studies were designed to test whether reflecting on and writing about a memory that is in line with an individual's traits can lead to greater feelings of nostalgia for that particular event. Previous research on the self in relation to the stories of one's life suggests that traits contribute to the development of life narratives and life narratives shape and help maintain personality (McLean, Pasupathi, & Pals, 2007). Additionally, positive psychological emotions, such as happiness, have been reported when life stories are congruent with personality attributes (McGregor, McAdams, & Little, 2005). Although previous research has examined the effects of trait-narrative congruence on well-being, these studies were the first to investigate whether or not congruence of traits and life narratives led to greater feelings of nostalgia.

The results of Studies 1 and 2 suggest that congruence between agentic and communal traits and life narratives is not a reliable predictor of nostalgia. This was especially true with independent achievement-oriented life narratives in both studies. In general, participants were more likely to report nostalgic feelings if they deemed their previous life event as relationship-focused regardless of their self-reported trait ratings. This was the case whether participants naturally wrote about a previous life event that focused on a relationship (Study 1) or were asked to write about a relationship-focused life event (Study 2). However, there were inconsistent patterns across the two studies. In Study 1, narratives rated as relationship-focused were deemed highly nostalgic for individuals who were both high and low on communal traits. Conversely, in

Study 2, individuals who were communally-oriented and who were asked to write about a close relationship experienced greater feelings of nostalgia than individuals who indicated that they have fewer communal traits. One of the main differences between the two studies was the methodology. In Study 1, participants were able to write about any positive event, whereas in Study 2 they were asked to write specifically about a relationship or an achievement from their lives. It is possible that in Study 1 participants had a greater mix of achievement and relationship themes within their essays than in Study 2. A more fine-grained analysis (e.g., LIWC) would perhaps clarify the focus of these narratives. Overall, the results of both studies provide further evidence for the social nature of nostalgia. For example, results of both studies demonstrated that achievement-focused life events can elicit feelings of nostalgia as long as they are placed in a social context (e.g., crediting teamwork as the reason for winning a championship game). This supports previous research suggesting that in a nostalgic memory, the self is the central character, but is typically surrounded by close others (Wildschut et al., 2006).

Although the present studies examined congruence of traits and positive memories, recent research has suggested that most internal triggers of nostalgia are negative. For example, self-discontinuity was found to elicit nostalgia (Sedikides, Wildschut, Routledge, & Arndt, 2015). Specifically, when individuals reflected on negative, significant changes that had recently occurred in their lives, they reported feeling nostalgic for the past. Additionally, negative affect (Barrett et al., 2010), social exclusion (Seehusen et al., 2013), and loneliness (Wildschut et al., 2010) have all been shown to trigger nostalgia (Sedikides et al., 2015). Thus, even though nostalgia has been shown to promote self-continuity (i.e., feeling connected with one's past self; Sedikides et al., 2015), nostalgia does not appear to always be reliably elicited by it. However, in line with previous research suggesting that simply reminiscing about close relationships can



also lead to nostalgia (Sedikides et al., 2015), Study 1 found that relationship-focused narratives overall predicted greater nostalgia. Study 2 found that this effect was higher for individuals who rated themselves high (as opposed to low) on communal traits. This suggests that for individuals who do not particularly value or place high importance on close relationships, nostalgia could be an emotion they are less likely to frequently experience or use to buffer a threat to the self-concept. For example, previous research has shown that individuals who are high on trait nostalgia (i.e., more prone to nostalgic feelings), are more likely to use nostalgia to buffer against an existential threat (e.g., being reminded of death; Juhl, Routledge, Arndt, Sedikides, & Wildschut, 2010). Related to the present results, this suggests that individuals who think of the self in terms of close relationships might get an added boost when reminiscing about an event that focused on close others which protects the self from the negative effects of self-threats. Future research should further investigate how individual differences influence nostalgia, particularly whether highly communal individuals experience nostalgia more regularly than those who are less communal. Moreover, future research could examine what strategies less communally-oriented individuals use to buffer against threats to the self.

Studies 1 and 2 replicated Cheung et al. (2013) and showed through a mediational analysis that both self-esteem and positive affect mediated the relationship between nostalgia and optimism. Participants who rated high feelings of nostalgia showed increased self-esteem and positive affect, which prompted greater feelings of optimism about the future. These findings provide further support for previous research indicating that nostalgia provides a boost to self-esteem, positive affect, and optimism through reflecting back on an ideal past and an ideal self (Kaplan, 1987; Sedikides et al., 2015).

Additional correlational analyses in Studies 1 and 2 revealed patterns worthy of mention. There were significant relationships among participant ratings of achievement-focused narratives (i.e., self-reliance focus) and self-esteem, optimism, and positive affect. There were no significant relationships, however, among participant ratings of relationship-focused narratives and self-esteem, optimism, and positive affect. These results suggest that writing about a previous independent achievement provides a boost to the self outside of nostalgia. Conversely, writing about a relationship, is more likely to result in feelings of nostalgia, which in turn leads to greater self-esteem, positive affect, and optimism. Future research could investigate the possibility that there are two different pathways that lead from memory reminiscence to increases in self-positivity, such as optimism.

### **Limitations**

There were several limitations in both studies that should be addressed. First, although most predictions in this study were not supported, there was a marginally significant finding in Study 2 of communal trait-narrative congruence influencing feelings of nostalgia. This was not found in Study 1 and would therefore need to be replicated to be able to interpret whether or not this was a meaningful finding. One possible reason similar results were not found in Study 1 could be due to the fact that the positive life narrative prompt was unable to generate clear patterns of narrative focus. It is possible that participants were constructing narratives with more achievement themes which is why there were not similar results. Additionally, participant affect was not measured prior to the completion of the life narrative prompt and the nostalgia measure in both Study 1 and Study 2. Including this measure before the narrative prompt would have provided an opportunity to use it as a control variable in addition to gender in the final analyses. Positive affect would not be expected to elicit nostalgia, however, based on previous research

suggesting that negative internal factors influence nostalgia (Sedikides et al., 2015), negative affect would be an expected predictor of nostalgia.

Although participants were emailed one day ahead of their scheduled laboratory session with their assigned narrative focus (e.g., positive, achievement, relationship) in both Study 1 and Study 2, it is still possible that some participants felt rushed trying to come up with a specific life event from their past. This could have led to lower feelings of nostalgia if the event was rushed and not personally meaningful for the individual. Perceived centrality of the event may have been reduced if ease of retrieval was difficult. Furthermore, the findings from both Study 1 and Study 2 are limited to specific life events. Participants were told they could not report on a general time period from their lives, which limits the scope of these findings. Given that nostalgia can be elicited when thinking about childhood years and critical periods in one's life (Sedikides et al., 2015), it is possible that individuals could rate large time periods from their lives and specific life events differently in terms of nostalgia. Specifically, it is possible that nostalgia would be rated even higher for larger periods of time as opposed to specific events from one's life. Future research could investigate whether the experience of nostalgia differs across various types of memories.

Finally, although the findings demonstrated clear relationships between communion and nostalgia, and congruency seemed relevant to communal traits (rather than agentic traits), the group achievement focus variable is a potential confound as these narratives were achievement-focused and were still shown to be related to nostalgia. Agency and communion were selected for these studies because they are broad and fundamental elements of self-perception. However, it is possible that more specific traits (e.g., the Big Five) would reveal stronger effects of

congruency. Future research could examine more specific traits in relation to life narratives and nostalgia.

### **Conclusion**

Congruence between the two fundamental traits of agency and communion and life narratives was investigated as a potential predictor of nostalgia in two studies. In general, participants in both studies tended to rate previous life events that were focused on relationships (rather than personal achievements) as highly nostalgic regardless of trait ratings. Additionally, participants tended to rate previous life events that were focused on group achievements as highly nostalgic. These results suggest that reminiscing about fond memories that involve close others can lead to feelings of nostalgia. Conversely, memories that involve personal achievements do not appear to lead to great feelings of nostalgia unless these memories also include close relationships. Interestingly, Study 2 found that individuals who rated themselves high on communal traits (e.g., caring, helpful, loyal) experienced significantly greater nostalgia than individuals who rated themselves low on these traits. These results highlight the largely social aspect of nostalgia. Although most participants experienced nostalgia for events that involved close others, this appeared to be magnified for individuals who defined the self in terms of close relationships and reduced for individuals who did not. As nostalgia was shown in both studies to lead to greater self-esteem, positive affect, and optimism, a continued examination of the influence of individual differences on this particular emotion would be beneficial.

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APPENDIX A  
IRB APPROVAL

**IOWA STATE UNIVERSITY**  
OF SCIENCE AND TECHNOLOGY

Institutional Review Board  
Office for Responsible Research  
Vice President for Research  
1138 Pearson Hall  
Ames, Iowa 50011-2207  
515 294-4500  
FAX 515 294-4267

**Date:** 8/21/2015  
**To:** Adrienne Austin  
W112 Lagomarcino  
**CC:** Dr. Kristi Costabile  
W112 Lagomarcino  
**From:** Office for Responsible Research  
**Title:** Traits and Life Stories  
**IRB ID:** 15-405  
**Approval Date:** 8/21/2015  
**Date for Continuing Review:** 8/20/2017  
**Submission Type:** New  
**Review Type:** Expedited

The project referenced above has received approval from the Institutional Review Board (IRB) at Iowa State University according to the dates shown above. Please refer to the IRB ID number shown above in all correspondence regarding this study.

To ensure compliance with federal regulations (45 CFR 46 & 21 CFR 56), please be sure to:

- **Use only the approved study materials** in your research, including the recruitment materials and informed consent documents that have the IRB approval stamp.
- **Retain signed informed consent documents for 3 years after the close of the study**, when documented consent is required.
- **Obtain IRB approval prior to implementing any changes** to the study by submitting a Modification Form for Non-Exempt Research or Amendment for Personnel Changes form, as necessary.
- **Immediately inform the IRB of (1) all serious and/or unexpected adverse experiences** involving risks to subjects or others; and (2) **any other unanticipated problems involving risks** to subjects or others.
- **Stop all research activity if IRB approval lapses**, unless continuation is necessary to prevent harm to research participants. Research activity can resume once IRB approval is reestablished.
- **Complete a new continuing review form** at least three to four weeks prior to the **date for continuing review** as noted above to provide sufficient time for the IRB to review and approve continuation of the study. We will send a courtesy reminder as this date approaches.

Please be aware that IRB approval means that you have met the requirements of federal regulations and ISU policies governing human subjects research. **Approval from other entities may also be needed.** For example, access to data from private records (e.g. student, medical, or employment records, etc.) that are protected by FERPA, HIPAA, or other confidentiality policies requires permission from the holders of those records. Similarly, for research conducted in institutions other than ISU (e.g., schools, other colleges or universities, medical facilities, companies, etc.), investigators must obtain permission from the institution(s) as required by their policies. **IRB approval in no way implies or guarantees that permission from these other entities will be granted.**

Upon completion of the project, please submit a Project Closure Form to the Office for Responsible Research, 1138 Pearson Hall, to officially close the project.

Please don't hesitate to contact us if you have questions or concerns at 515-294-4566 or [IRB@iastate.edu](mailto:IRB@iastate.edu).

## APPENDIX B

## AGENCY AND COMMUNION ITEMS

For each item answer the question, "How does the term best fit you?" according to the following scale:

1 = Never or Almost Never True 2 = Usually Not True 3 = Sometimes but Infrequently True 4 = Occasionally True 5 = Often True 6 = Usually True 7 = Always or Almost Always True

Able  
Active  
Assertive  
Creative  
Independent  
Intelligent  
Rational  
Self-reliant  
Caring  
Helpful  
Loyal  
Polite  
Sensitive  
Sympathetic  
Trustworthy  
Understanding

## APPENDIX C

## THE LIFE STORY INTERVIEW

## Life Story Study

Instructions. The purpose of this exercise is to sample a key event in your life. We will be asking you to construct your own autobiography – the story of your life as you understand it, past, present, and anticipated future. We will be asking you to focus on one particular “episode” or “scene” in your life story and to describe it in some detail.

People’s lives vary tremendously, and people make sense of their lives in a tremendous variety of ways. We want to “read” your life story event as if it were a book, seeing what kinds of characters, scenes, and themes you identify.

This life-story exercise is organized around the idea of critical events or episodes. An event or episode is a specific happening that occurs in a particular time and place. It is most helpful to think of such an event as constituting a specific moment in your life that stands out for some reason. Examples might be a surprise birthday party that your friends threw for you on your 18<sup>th</sup> birthday, or a particular conversation with your friend in November of last year.

Your last summer vacation, by contrast, is not an event because it occurred over an extended period of time, even though it may be very important to you. Thus, your vacation would be more like a series of events than an event per se. We want you to concentrate on a single event, rather than on a series of events or an extended period of time.

On the following page, for the event we ask you to describe, we would like you to write a description that is at least a few paragraphs in length.

## APPENDIX C CONTINUED

## THE LIFE STORY INTERVIEW

**POSITIVE, PERSONALLY SIGNIFICANT EXPERIENCE**

Many people report occasional positive and personally significant experiences. These are generally moments or episodes in a person's life that are positive, personally meaningful, and represent who they are. Indeed, these experiences vary widely. Some people report them to be associated with religious or mystical experience. Others find great joy or excitement in vigorous athletics, reading a good novel, artistic expression, or in love or friendship. This experience may be seen as a high point in your life story – a particular experience that stands out in your memory as positive and representative of you. Please describe below in some detail a positive, personally significant event that you have experienced sometime in your life. Make sure that this is a particular and specific incident (e.g., happened at a particular time and in a particular place) rather than a general “time” or “period” in your life. Think about the event carefully and then include all of the following in your written description of the event:

1. When did the event occur? How old were you?
  2. What exactly happened in the event?
  3. Who was involved in the event?
  4. What were you thinking, feeling, and wanting in the event?
  5. Why do you think that this is an important event in your life story?
- What does this event say about who you are, who you were, who you might be, and how you have developed over time?

## Life Narrative Follow-Up Questions

Please rate the degree to which the story you wrote earlier reflects the following themes:

1 = *strongly disagree* 2 = *disagree* 3 = *neutral* 4 = *agree* 5 = *strongly agree*.

Independent Achievement  
 Self-reliance  
 Group Achievement  
 Care for others  
 Relationships



## APPENDIX D

## NOSTALGIA QUESTIONNAIRE

Please indicate how strongly you agree or disagree with the following statements:

1 = *strongly disagree* 2 = *disagree* 3 = *somewhat disagree* 4 = *somewhat agree* 5 = *agree* 6 = *strongly agree*.

- 1) Right now, I am feeling quite nostalgic
- 2) Right now, I am having nostalgic feelings
- 3) I feel nostalgic at the moment
- 4) I feel both longing for the past and happiness after thinking about this event
- 5) Right now, I do not feel nostalgic **R**
- 6) I am feeling sentimental for the past
- 7) I cherish this memory from my past
- 8) I have or wish I had a keepsake (e.g., a photo) from this event
- 9) I do not want or need a keepsake (e.g., a photo) from this event **R?**
- 10) I take out or would take out (if I had one) any keepsakes (e.g., a photo) from this event often
- 11) I look back on this event with great fondness
- 12) I wish I could re-experience this particular event
- 13) I would not want to re-live this event **R**

APPENDIX E

SELF-ESTEEM QUESTIONS

1 = *strongly disagree* 2 = *disagree* 3 = *neutral* 4 = *agree* 5 = *strongly agree*.

1. After thinking about this event, I feel good about myself
2. After thinking about this event, I like myself better
3. After thinking about this event, I like myself more
4. After thinking about this event, I have many positive qualities

APPENDIX F  
OPTIMISM QUESTIONNAIRE

Please indicate how strongly you agree or disagree with the following statements:

1 = *strongly disagree* 2 = *disagree* 3 = *somewhat disagree* 4 = *somewhat agree* 5 = *agree* 6 = *strongly agree*.

- 1) This event makes me feel ready to take on new challenges
- 2) This event makes me feel optimistic about my future
- 3) This event makes me feel like the sky is the limit
- 4) This event gives me a feeling of hope about my future
- 5) This event makes me feel optimistic about my future achievements
- 6) This event makes me feel optimistic about my future relationships

## APPENDIX G

## POSITIVE AND NEGATIVE AFFECT SCHEDULE (PANAS)

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you have felt like this in the past few hours. Use the following scale to record your answers.

Very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

Interested \_\_\_\_\_

Distressed \_\_\_\_\_

Excited \_\_\_\_\_

Upset \_\_\_\_\_

Strong \_\_\_\_\_

Guilty \_\_\_\_\_

Scared \_\_\_\_\_

Hostile \_\_\_\_\_

Enthusiastic \_\_\_\_\_

Proud \_\_\_\_\_

Irritable \_\_\_\_\_

Alert \_\_\_\_\_

Ashamed \_\_\_\_\_

Inspired \_\_\_\_\_

Nervous \_\_\_\_\_

Determined \_\_\_\_\_

Attentive \_\_\_\_\_

Jittery \_\_\_\_\_

Active \_\_\_\_\_

Afraid \_\_\_\_\_

APPENDIX H  
DEMOGRAPHIC QUESTIONNAIRE

Please answer the following questions about yourself.

How old are you? \_\_\_\_\_

Gender \_\_\_\_\_

Which of the following best describes you? Check all that apply.

Native American \_\_\_

African-American \_\_\_

Latino Hispanic \_\_\_

Non-Hispanic White (i.e. Caucasian) \_\_\_

Asian/Pacific Islander \_\_\_

Indian \_\_\_

Other (please specify) \_\_\_

What is the first language you learned to speak? \_\_\_\_\_

What language do you speak at home? \_\_\_\_\_

Did you have any difficulties as you completed this study? \_\_\_\_\_

## APPENDIX I

## ACHIEVEMENT LIFE NARRATIVE INTERVIEW

## Life Story Study

**Instructions.** The purpose of this exercise is to sample a key event in your life. We will be asking you to construct your own autobiography -- the story of your life as you understand it, past, present, and anticipated future. We will be asking you to focus on one particular "episode" or "scene" in your life story and to describe it in some detail.

People's lives vary tremendously, and people make sense of their lives in a tremendous variety of ways. We want to "read" your life story event as if it were a book, seeing what kinds of characters, scenes, and themes you identify.

This life-story exercise is organized around the idea of critical events or episodes. An event or episode is a specific happening that occurs in a particular time and place. It is most helpful to think of such an event as constituting a specific moment in your life which stands out for some reason.

Your last summer vacation, for example, is not an event because it occurred over an extended period of time, even though it may be very important to you. Thus, your vacation would be more like a series of events than an event per se. We want you to concentrate on a single event, rather than on a series of events or an extended period of time.

On the following page, for the event we ask you to describe, we would like you to write a description that is at least a few paragraphs in length.

**POSITIVE, PERSONALLY SIGNIFICANT EXPERIENCE**

Many people report occasional positive and personally significant experiences. These are generally moments or episodes in a person's life that are positive, personally meaningful, and represent who they are. This experience may be seen as a high point in your life story -- a particular experience that stands out in your memory as positive and representative of you.

**ACHIEVEMENT LIFE STORY**

**Please describe below in some detail a positive experience from your life where you achieved something.** This refers to any achievement that was obtained by you. The achievement can be tangible (e.g., winning an award) or more abstract (e.g., growing as a person, overcoming an obstacle). Make sure that you describe a particular and specific incident (e.g., happened at a particular time and in a particular place) rather than a general "time" or "period" in your life. Please report when the event occurred and what happened. Also report why this is an important event in your life story and what this event says about who you are, who you were, who you might be, and how you have developed over time.

**Please type your story below.**

## APPENDIX I CONTINUED

## LIFE NARRATIVE FOLLOW-UP QUESTIONS

Please rate the degree to which the story you wrote earlier reflects the following themes:

1 = *strongly disagree* 2 = *disagree* 3 = *neutral* 4 = *agree* 5 = *strongly agree*.

Independent Achievement

Self-reliance

Group Achievement

Care for others

Relationships

## APPENDIX J

## RELATIONSHIP LIFE NARRATIVE INTERVIEW

## Life Story Study

**Instructions.** The purpose of this exercise is to sample a key event in your life. We will be asking you to construct your own autobiography -- the story of your life as you understand it, past, present, and anticipated future. We will be asking you to focus on one particular "episode" or "scene" in your life story and to describe it in some detail.

People's lives vary tremendously, and people make sense of their lives in a tremendous variety of ways. We want to "read" your life story event as if it were a book, seeing what kinds of characters, scenes, and themes you identify.

This life-story exercise is organized around the idea of critical events or episodes. An event or episode is a specific happening that occurs in a particular time and place. It is most helpful to think of such an event as constituting a specific moment in your life which stands out for some reason.

Your last summer vacation, for example, is not an event because it occurred over an extended period of time, even though it may be very important to you. Thus, your vacation would be more like a series of events than an event per se. We want you to concentrate on a single event, rather than on a series of events or an extended period of time.

On the following page, for the event we ask you to describe, we would like you to write a description that is at least a few paragraphs in length.

**POSITIVE, PERSONALLY SIGNIFICANT EXPERIENCE**

Many people report occasional positive and personally significant experiences. These are generally moments or episodes in a person's life that are positive, personally meaningful, and represent who they are. This experience may be seen as a high point in your life story -- a particular experience that stands out in your memory as positive and representative of you.

**RELATIONSHIP LIFE STORY**

**Please describe below in some detail a peak experience from your life that revolved around a relationship.** This refers to any positive event that involved spending time with close others. The event itself must be focused on a specific relationship (e.g., a conversation with a family member that stands out, time spent having a movie marathon with friends, etc.). The relationship story can focus on friends, family, or a romantic partner. Make sure that you describe a particular and specific incident (e.g., happened at a particular time and in a particular place) rather than a general "time" or "period" in your life. Please report when the event occurred and what happened. Also report why this is an important event in your life story and what this event says about who you are, who you were, who you might be, and how you have developed over time.

**Please type your story below.**



## APPENDIX J CONTINUED

## LIFE NARRATIVE FOLLOW-UP QUESTIONS

Please rate the degree to which the story you wrote earlier reflects the following themes:

1 = *strongly disagree* 2 = *disagree* 3 = *neutral* 4 = *agree* 5 = *strongly agree*.

Independent Achievement

Self-reliance

Group Achievement

Care for others

Relationships