

The Pennsylvania State University

The Graduate School

College of the Liberal Arts

IDENTITY UNCERTAINTY, COMMUNICATION, AND  
SUBJECTIVE WELL-BEING DURING THE TRANSITION TO COLLEGE

A Dissertation in

Communication Arts and Sciences

by

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Submitted in Partial Fulfillment  
of the Requirements  
for the Degree of

Doctor of Philosophy

August 2009

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## ABSTRACT

This dissertation was founded on the assumption that identity uncertainty negatively affects people's subjective well-being, and that communication may impact the experience of identity uncertainty. Chapter 1 reviewed literature on theories of identity and explored how communication shapes identity. Chapter 2 explored the developmental aspect of identity, especially during the period of emerging adulthood. This chapter advanced *identity uncertainty* as a construct that encompasses the doubts and questions people have about their self concept, which may be especially prominent during emerging adulthood. Chapter 3 described how friendships are formed and maintained, as well as the unique role that friends play during emerging adulthood. Then, hypotheses were advanced that specified the associations between identity uncertainty and subjective well-being, and communication and identity uncertainty.

A pilot study exploring the construct and measurement of identity uncertainty is described in Chapter 4. A longitudinal study spanning the course of a semester was conducted. Participants completed 2 online surveys and a series of online diary-like surveys. Specifically, results from the pilot study indicate that the identity uncertainty measure has construct validity and discriminant validity. The results also suggest a negative relationship between identity uncertainty and subjective well-being, and that communication may reduce identity uncertainty.

Chapter 5 described the methods of the main study, which involved 3 online surveys and a diary-like survey conducted over the course of a semester. Measures for the online surveys included identity uncertainty, subjective well-being, contingencies of self-

worth, willingness to self-disclose, and tolerance for uncertainty. For the diary survey, participants were asked to describe conversations about identity uncertainty.

Chapter 6 presents the results of the main study. A series of correlations, regression analyses, and HLM analyses were used to test the hypotheses. First, I tested the association between identity uncertainty and subjective well-being. Results indicated an overall negative association between the variables. Next, I tested the affect of contingencies of self-worth on the association. The relationship between identity uncertainty and subjective well-being was more negative when people's self-worth about a facet of identity was tied to that facet. Finally, I explored the association between communication and identity uncertainty. Willingness to self-disclose and identity uncertainty were negatively related, and tolerance for uncertainty did not moderate that association.

Finally, Chapter 7 discusses the implications of the pilot and main studies for understanding identity uncertainty, subjective well-being, and communication. The chapter explores the practical applications of the finding for students during the transition to college. Finally, the chapter concludes by examining the strengths and weaknesses of the dissertation.

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## ACKNOWLEDGEMENTS

With a project of this magnitude, there are many people to thank. First and foremost, this project would not have been possible without the help, support, and guidance of my advisor, Dr. Denise H. Solomon. Her patience and encouragement, high expectations and ability to put things into perspective, and confidence in me enabled me to see this project through to the end. I am forever grateful to her for all of her help, and honored to have worked with her.

I would also like to thank the members of my committee, Dr. Jon F. Nussbaum, Dr. Michelle Miller-Day, and Dr. Mary Beth Oliver. Without their knowledge and expertise, this project would have suffered. I am appreciative of their support and guidance.

This project would not have been possible without the love of my family. I would like to thank my parents, Lyn and Paul Goodwin, for always giving me what I needed, and teaching me to work for what I wanted. They have enabled me to do things most people only dream of doing. I would also like to my siblings, Debby, Drew, Lynn, and Paul for their support.

Anyone who has written a dissertation (and has read this dissertation) knows the important role that friends play in life. I would like to thank the many wonderful friends that have helped me while working on this project. Jen Priem has helped me in more ways than she will ever know. She has kept me motivated, helped me with analyses, and been a true friend. Lori Miraldi has listened to me complain and kept me in check. Keli Steuber has provided comic relief and helped me keep things in perspective. Andy High

has made me laugh and reminded me to have fun. To each of you I owe my greatest appreciation.

I dedicate this dissertation to my grandfather, Paul Goodwin, Sr.

## CHAPTER 1

Emerging adulthood encompasses the developmental period of life during which individuals have more autonomy than they did as adolescents in their family home, but they do not yet have the independence and responsibilities associated with adulthood. The theory of emerging adulthood (Arnett, 2000) suggests that a person's identity undergoes substantial changes during this time of life. In coping with these changes, people may suffer from negative consequences associated with experimenting with new identities. For example, research has shown that the use of alcohol and marijuana peaks in late adolescence and early adulthood and cigarette use increases during early adulthood (Bates & Labouvie, 1997); in another study, 30 percent of high school seniors reported driving while drunk or riding with someone who had been drinking during the last two weeks (Johnston, O'Malley, Bachman, & Schulenberg, 2007). Binge drinking is correlated with riding with a driver who had been drinking, being currently sexually active, smoking cigarettes or cigars, being a victim of dating violence, attempting suicide, and using illicit drugs (Miller, Naimi, Brewer, & Jones, 2007). Substance abuse is also correlated with suicide attempts and completions during late adolescence (Windle & Windle, 1997), and nearly 10,000 people between the ages of 15 and 24 committed suicide in 2004 (National Center for Health Statistics, 2008). Depression, which affects boys and girls during early adolescence, increases in frequency in late adolescence and early adulthood, and the likelihood of experiencing depression continues to increase until people reach the age of 26 (Radloff, 1991). Women in their late teens and early twenties may also suffer from eating disorders (Striegel-Moore, 1993). Arnett (2000) argued that these behaviors are the result of coping with changes in identity.

A person's identity is defined as how an individual views him or her self. Traditionally, identity has been viewed from two perspectives: a psychological perspective and a sociological perspective. The psychological perspective on identity defines it as a social construction of the self-concept that provides meanings for an individual's sense of self (Tajfel & Turner, 1986). According to the sociological perspective, identity reflects the roles a person encompasses, and the part society plays in influencing an individual's sense of self (Schlenker, 1985; Stryker, 1968; Stryker & Burke, 2000). Most scholars agree that identity is best defined using both perspectives, such that identity is a construction of the self based on the perceived agreement about what the self is like, which is formed through interactions with others. The diversity of new experiences, relationships, and roles is at the heart of the identity issues associated with emerging adulthood.

One antidote to the identity changes and challenges that characterize emerging adulthood is communication within friendships. Friendships provide sources of social comparison, which allows individuals to try out new roles and gain feedback to either validate or disconfirm those roles (Weiss & Lowenthal, 1975). Because friendships provide a safe place for people to be themselves, friendships are especially important during life transitions such as adolescence, emerging adulthood, parenthood, and retirement (Dickens & Perlman, 1981). Research suggests that during some transitions, people prefer to discuss their issues with friends rather than family members (Tokuno, 1983), and that friends help buffer the stress associated with these transitions (Brooks, 2002; Oswald & Clark, 2003). Compared to other relationships, many people find friendships to provide more feelings of freedom, closeness, and pleasure, as well as

higher levels of self-disclosure (Argyle & Henderson, 1985; Fehr, 1996). Friendships can provide emotional (e.g., intimacy, acceptance, self-esteem), cognitive (e.g., stimulation, information), and material (e.g., help with tasks, tangible support) support (Solano, 1986). It is through social support that friends enable people to cope with stress, become more resistant to illness, and experience greater happiness and life satisfaction (Duck, 1983).

The goal of this dissertation is to explore the role of communication with friends in the identity process during emerging adulthood. Specifically, this dissertation seeks to determine how conversations with friends affect uncertainty about different facets of identity. In particular, I hope to gain insight into how communication increases, decreases, or maintains uncertainty about an identity. The aim of this chapter is to lay the foundation for exploring the role of communication with friends during identity development in the context of emerging adulthood. I begin by reviewing different theories used to understand identity. Next, I discuss how communication is an integral part of identity. Based on research from these different perspectives, I advance five core assumptions about identity. Finally, I preview the subsequent chapters in the project.

### Theories of Identity

Beginning with Cooley (1902) and Mead (1934), a long tradition of research has focused on identity. Early definitions of identity were simply stated as how an individual is viewed by others. Cooley (1902) used the concept of the “looking glass self” to describe how people view themselves through the eyes of others. Later, Mead (1934) used this concept to develop the self as “I” and “me,” which incorporates the attitudes and responses of others toward the “me.” More traditional theories of identity have

focused on social identities (those that are a construction of society; Tajfel & Turner, 1986), and personal identities (those that are formed within the individual; Stryker, 1968). Social identity theory (Tajfel & Turner, 1986) and identity theory (Stryker, 1968) are theories that explicate these two perspectives on identity, and a person-in-context framework (Adams & Marshall, 1996) explores identity through both perspectives.

### *Social Identity Theory*

Social identity theory (Tajfel & Turner, 1986) recognizes both the personal and social aspect of an identity, but focuses on the social aspect. Personal identity is defined as an individual's conception of his or her own individual characteristics, such as their traits, likes, and dislikes. Social identity, on the other hand, is an individual's identification as a member of particular social categories (e.g., gender, ethnicity), and is defined as an individual's conception of groups to which he or she belongs and the evaluative connotations attached to those groups. An individual becomes a member of a social group when "two or more individuals who share a common social identification of themselves or . . . perceive themselves to be members of the same social category" (Turner, 1982, p. 15) share a knowledge and understanding of the values attached to the group (Hogg & Abrams, 1988). The group then provides a definition of who one is in terms of the defining characteristics of the group. For example, femininity may be an identity that is salient to women. The word "woman" is associated with the feminine identity, implying that women identify with other women in terms of the shared history of what it means to be feminine. In turn, many women will act in such a way that is perceived to be feminine, and women are evaluated in terms of this feminine identity. It

is in this way that social identities describe, prescribe, and evaluate an individual's attributes as a member of that group.

Membership within a group dictates how an individual should think, feel, and behave (Hogg, Terry, & White, 1995). The evaluative nature of social identities suggests that members of groups are motivated to behave in ways that are consistent with the ideals of the groups. Empirical evidence supports this claim. Hogg and Hardie (1992) found that men and women's group identification influences their view of self as prototypical in that group. They further discovered that people who strongly identify with a group feel a great attraction to the group as a whole. In other words, if a man identifies himself as part of a masculine group, he feels attracted to the group as a whole, not just to certain aspects of the group. Similarly, Palomares (2004) found that men and women whose gender was salient used typical gender-linked language, and men and women with low gender salience used countertypical gender-linked language. For example, a woman with high gender salience is more likely to use a feminine style of language, and a woman with low gender salience is more likely to use a masculine style of language.

If, however, group members' behaviors are not in line with expectations of the group, members may experience a disconnect from the group (Hogg et al., 1995), which can negatively impact their self concept (Tajfel & Turner, 1986). For example, despite the fact that many women do not identify with the notion of femininity, this association with the feminine identity is a norm in U.S. society. A woman may perceive there to be negative connotations associated with femininity, and thus not want to embody that aspect of womanhood; by doing so, however, she may not be valued by others who believe femininity to be central to what it means to be a woman. For some women, this

contradiction may create issues with identifying as a woman, thereby influencing that woman's self-concept.

Social identity can influence a person's self-concept in other ways. As Hogg and Abrams (1988) suggested, when individuals become members of social groups, they eliminate the possibility of becoming members of contrasting groups. For example, a Black individual does not often claim both a Black and a White social identity. A person born to Black and White parents may find this a difficult choice and struggle with his or her self-concept given this constraint of having to choose between these categories of ethnicity. Research on multiracial Japanese European Americans suggests that often this struggle exists because the physical ethnic characteristics displayed by these individuals creates feelings of exclusion from the ethnicity that is not physically apparent (AhnAllen, Suyemoto, & Carter, 2006). Other research suggests that individuals of mixed ethnicity do not necessarily identify with their dominant heritage. Abu-Rayya (2006) found that children of Arab and European ethnicities living in Israel identified more with their Arab ethnicity, even if their European ethnicity was dominant.

Hogg and Abrams (1988) also argued that because individuals are born into preexisting social groups, social categories precede individuals. For example, a Black individual is perceived as a member of the Black social category before any of his or her individual characteristics are considered. At the same time an individual will have his or her own history and a distinct combination of memberships into social groups, and the set of social identities that create that person's self-concept is unique (Hogg et al., 1995). Research on American Indians in Oklahoma (Yun Kim, Lujan, & Dixon 1998) demonstrated how American Indians cope with the identity ascribed to them by the non-



Indians. American Indians identify most with their Indian heritage, but those who are able to cope with the ascribed identities and place themselves between the Indian and non-Indian worlds experience functional fitness and positive psychological health.

To summarize, social identity theory suggests that people view themselves as members of certain groups in comparison to members of other groups. To maintain a social identity, an individual must share perspectives, knowledge, and history of the groups to which they belong. Additionally, an individual's experience within a given social group can affect his or her self-concept positively or negatively. According to research on social identity theory (for example Hogg & Abrams, 1988; Hogg et al., 1995; Tajfel & Turner, 1986), a person's social identity is developed and maintained through his or her membership in various social groups.

### *Identity Theory*

Identity theory (Stryker, 1968, 1980; Turner, 1987) suggests that identity is defined through individuals' role-related behaviors. The theory explains these behaviors in terms of an individuals' relationship between self and society. Based on symbolic interactionism, identity theorists believe that society affects social behavior through its influence on the self (Mead, 1934). Stryker and Serpe (1982) pointed out that as a reflection of society, the self is multifaceted. As people develop a sense of themselves, they construct multiple identities because of the different roles they occupy (Burke, 1980; Hogg et al., 1995; Turner, 1987). Identity theory suggests we are able to manage multiple roles because we have distinct components of the self called role identities.

*Role identities.* Role identities are self-conceptions or self-definitions that people use to understand their position in the social structure (Hogg et al., 1995; Thoits, 1991).

Role identities provide meaning for the self by distinguishing how people should behave in connection with other roles. Individuals also use the responses about their role identities that they receive from others during social interactions to provide meaning for the self (Burke & Reitzes, 1981). These interactions provide feedback concerning appropriate behavior for that particular identity. When others support the enactment of a role, the individual's status as a role member is confirmed (Callero, 1985), and the individual feels comfortable with that role (Stryker, 1968). If the enactment of the role is not confirmed, the individual may experience psychological distress (Stryker & Serpe, 1982; Thoits, 1991). Conversely, when role identities are confirmed, they may become salient (Stryker, 1968).

*Identity salience.* Given that people have multiple identities, identity theory suggests that people organize their identities hierarchically based on their salience, or the “probability that they will form the basis for action” (Hogg et al., 1995, p. 257). According to Stryker (1987), identity salience is the likelihood that an identity will be invoked in any given situation. Other identity theorists suggest that identity salience is based on the degree to which a person feels a particular identity is important or significant relative to other identities (Hogg et al., 1995). In Stryker's (1987) view, a man's identity as a grandfather may not be as salient as his role as a man or a member of his ethnic group because the man would probably enact his male or ethnic identity more often than his grandfather identity. An identity can increase in salience if it is confirmed through interactions. For example, as a grandfather interacts with his grandchild, he may feel confirmed in his role as a grandfather. This identity then becomes salient, and it becomes an important role in the grandfather's life. In this way, salient identities are

associated with a person's feelings of self-worth and psychological subjective well-being (Callero, 1985; Reitzes & Mutran, 2004; Thoits, 1991) and can influence people's interpersonal relationships (Callero, 1985).

*Identity commitment.* A final component of identity theory is commitment. Stryker (1968) suggested that in the context of identity, commitment is the degree to which the strength of a person's relationship depends on that person being committed to the particular role identity under which that relationship exists. Commitment is thus measured by "the 'costs' of giving up meaningful relations to others should alternative courses of action be pursued" (Stryker, 1968, p. 560). Stryker (1968) explained two dimensions of commitment: extensiveness and intensiveness. Extensiveness refers to the number of relationships a person has based on having an identity, and intensiveness refers to the depth of the relationships entered by virtue of an identity. Studies show that commitment is positively related to the hierarchical ordering of identities and the frequency of role performances (Stryker, 1980). For example, to maintain their identity, first-year college students decorate their dorm rooms similarly to their rooms at home to remind themselves and others of their identity (Serpe & Stryker, 1987). Also, women who are committed to their career place great importance on their role as an employee, but struggle to meet other roles, such as parent or spouse (Raskin, 2006).

To summarize, identity theory focuses on the different roles of individuals. Social influences affect how individuals' perceive the roles they hold and guide how they should be enacted. Throughout the lifespan, people acquire multiple roles and learn to negotiate them by establishing a hierarchy of salient roles and through their level of commitment to

any given role. Ultimately, it is through interaction with others that people manage their multiple roles.

### *Person-in-Context*

A social psychological perspective on identity suggests that socialization, the self, the process of growth and development, and person-in-context contribute to the identity formation of adolescents and young adults (Adams & Marshall, 1996). This perspective views identity as a psychological structure that is a self-regulatory system, which functions to process information, manage impressions, and behave appropriately (Adams & Marshall, 1996). Adams and Marshall (1996) further stated that identity is functional in that it: (a) provides structure for understanding who one is; (b) provides meaning and direction through commitments, values, and goals; (c) provides a sense of personal control and free will; (d) strives for consistency, coherence, and harmony between values, beliefs, and commitments; and (e) enables the recognition of potential through a sense of future, possibilities, and alternative choices.

To examine the person-in-context, the self and identity are characterized by four different foci: situational, social structural, biographical-historical, and intrapersonal (Gecas & Burke, 1995). The situational focus refers to the emergence and maintenance of the self in interpersonal interactions. The social structural focus emphasizes the consequences of role relationships and characteristics of social groups. The biographical-historical focus suggests that the self is constructed culturally and historically. The intrapersonal focus refers to the social-cognitive process, personality, and behavior (Adams & Marshall, 1996).

In summary, the person-in-context approach to identity suggests that identity is constructed in a relational context. Macro-level relational influences such as culture, institutional values, and ethnic membership, and micro-level influences such as interpersonal communication and routine daily interactions will affect identity. Finally, these macro- and micro-level relational influences are socially constructed and communicated. Taken together, social identity theory, identity theory, and person-in-context propose that identity is influenced by society and can change over time. By interacting with other people, individuals gain a sense of who they are through comparison to other social groups, by negotiating roles, and through exposure to social and personal relational influences.

#### Identity and Communication

One aspect of identity, which none of the previously mentioned frameworks or perspectives explicitly addresses, involves experiences of interpersonal communication. Communication is implicitly part of social identity theory and identity theory in that these theories suggest that identities are formed and maintained through interactions with others. What these perspective do not consider, however, is what occurs during these interactions. The communication theory of identity (CTI; Hecht, 1993) and research on personal narrative (e.g., Coupland & Nussbaum, 1993; Holmes, 2005) express the role that communication plays in interactions that help form and maintain identities.

#### *The Communication Theory of Identity*

According to Hecht (1993), identity as a construct is located at different levels, because it is both individual and social in nature. The communication theory of identity reflects these multiple levels by assuming four frames of identity: personal, enacted,

relational, and communal. Identity is located in a person (personal), communication (enacted), a relationship (relational), and/or a group (communal) (Hecht, Warren, Jung, & Krieger, 2004). The concept of different frames of identity suggests that identity is never located in just one aspect of a persons' life, but in all aspects. Identity can be viewed through one frame, any combination of frames, or all four frames simultaneously. In this sense, the frames cannot exist independent of each other, and they are interpenetrated with each other (Hecht et al., 2004)

The personal frame of identity as a construct refers to the self-concept, self-image, and sense of self-being experienced by an individual. It exists at the individual level of analysis as a characteristic of individuals in that it occurs apart from the other frames (Jung & Hecht, 2004). This frame allows people to understand how they define themselves both in general and in particular situations (Hecht, 1993).

The enacted frame of identity as a construct suggests that identity is enacted through communication. The self is performed or expressed through an individual's actions, symbol preference, and style. This frame assumes that people enact their identity and exchange the enacted identities in communication (Jung & Hecht, 2004). For example, a college student may enact one identity when with his or her friends and a very different identity when with his or her parents. When with his or her friends, the student may be more likely to swear or stay out late at night, which the student might not do when with his or her parents. In this way, communication is the locus of identity when identity is enacted (Hecht et al., 2004).

The relational frame has four levels (Jung & Hecht, 2004). An ascribed relational identity suggests an individual forms an identity based on his or her perceptions of how

others view him or her. For example, a man may consider himself outgoing if his friends indicate that he is the life of the party or very friendly. Second, individuals identify who they are based on their relationships with others (Jung & Hecht, 2004). For example, a woman can identify as a mother only if she has a child. A third level suggests that people have multiple identities that exist in relation to each other (Jung & Hecht, 2004). For example, a person can be both a spouse and an employee. The fourth level posits that the relationship itself is a unit of identity (Hecht et al., 2004). For example, a couple can establish an identity as a couple.

The final frame is the communal frame. This frame is similar to social identity in that it locates identity at the group level (Hecht et al., 2004). Groups form based on similar values, beliefs, characteristics, and histories, thus establishing a group identity.

These four frames work individually or in any combination, and the frames may operate cooperatively or in opposition to each other (Hecht & Faulkner, 2000). For example, some working parents are able to be both an effective employee and parent, while others struggle to be both. When an individual experiences a discrepancy between or among the frames of identity, the individual experiences an identity gap (Hecht, Jackson, & Pitts, 2005). Because identity gaps are a result of communication and social relations (Jung & Hecht, 2004) and two people never completely share experiences or interpretations, identity gaps are unavoidable. Thus, the communication theory of identity highlights how communication contributes to both clarity and discrepancies in a person's identity.

### *Personal Narrative*

Within all social interactions, people constantly construct and negotiate their social identities by telling stories (Langellier, 1989). Personal narrative as a means of revealing the self, however, has been overlooked in the social sciences (Markham Shaw, 1997). Identities develop and change over time, and personal narrative is one way in which individuals recognize and create these changes. A narrative is a story in which the teller communicates events that took place in the past, might have taken place, or might take place in the future (Sunwolf & Frey, 2001). A life story is a type of narrative in which an individual shares events, advice, and histories (McKay, 1993). It is through narrative, both personal and of others, that individuals learn who they are. Telling one's story has been linked with authenticating life events through the interpretation and expression of one's experiences (Handler, 1987), and providing deeper understanding of one's life by binding together discrete events into an interpretable whole (Goldberg, 1982). In this sense, people understand who they are through the stories they tell. People use stories as ways of making sense of the self from childhood throughout the lifespan (Langellier, 1989).

Personal narrative is similar to the enacted frame of identity expressed in the communication theory of identity. Individuals enact their identity through their stories, and thus engage in identity management. According to Goffman (1967), individuals will behave in ways that match the self-image they are trying to uphold. In the same way, when an individual is enacting his or her identity, the individual will often only reveal parts of his or her identity to maintain self-preservation (Jung & Hecht, 2004). A person will tell stories that support his or her own view of self (Arkin, 1986). In this sense,



people manage their identities through facework, or their publicly displayed image of self (Brown & Levinson, 1987). A positive face is used to portray an identity that is perceived as favorable by others. Thus, individuals will shape their stories to maintain a positive face.

Personal narrative is subject to selective recall, reinterpretation and reexplanation of the past, and filling in gaps in the memory by inferring what happened, which can influence our view of self and how we view others (Ross & Conway, 1986). These characteristics of personal narrative allow individuals to manage their identity. Given that we have multiple identities, these characteristics are useful when an individual desires to focus on one aspect of their identity more than others or to present a negative identity more positively. Stories can change simply because each time they are told, first time listeners may be present, new questions may be asked, and new experiences have happened (Van Langenhove & Harré, 1993). Finally, because people attempt to have social interactions with people who treat them in a manner consistent with their self-views (Swann, 1984), people can alter their stories to ensure that consistency.

In summary, by reflecting on and sharing life events, an individual can better understand his or her own identity (Atchley, 1989). The stories that people tell, whether positive or negative (McLean & Thorne, 2006) provide others with sense of who a person is, and function as a way of managing a person's identity (Brown & Levinson, 1987).

#### Core Assumptions About Identity

Although each of the perspectives discussed to this point emphasizes different aspects of identity, they share several assumptions about its nature and operation. Key theories of identity, including social identity theory (Tajfel & Turner, 1986) and identity

theory (Stryker, 1968), provide a framework for understanding identity. The communication theory of identity (Hecht, 1993) and personal narratives address more specifically the role that communication plays in identity formation and management. Although these theories offer different points of emphasis, they share several core assumptions about identity processes.

#### *Identity Arises from Group Membership*

Social identity is defined as an individual's identification as a member of certain social categories (e.g., groups based on gender or ethnicity; Tajfel & Turner, 1986). Social identity encompasses both people's conception of groups to which they belong and the evaluative connotations they attach to those groups. Because social identities arise from membership in a community, they can be shared among a group of people (Hecht & Faulkner, 2000). In turn, the individual takes on the identity of the group or community.

#### *Identity Arises from Relationships*

The communication theory of identity defines the relational frame of identity as the facets of an individual's identity that arise from relationships with others (Hecht & Faulkner, 2000), suggesting that identity is influenced by the personal relationships a person maintains. Because identity is formed through social interactions from the different types of relationships that people have, these relationships allow individuals to construct and develop particular identities. For example, people can only understand an identity of a parent, a son, a niece, or a friend if they participate in relationships that allow them to enact these roles. Furthermore, Adams and Marshall (1996) posited that our relationships with others serve to meet our need for having an identity, help us create a unique, individuated identity, and enhance our sense of belonging and mattering (i.e.

our social identity). Thus, the nature of the socialization that occurs in our relationships, allows us to have an identity.

### *Communication Reveals Identity*

The communication theory of identity and personal narrative perspective encompass the ways in which communication reveals and, thus, manages identity. According to the communication theory of identity, the enacted layer of identity suggests that individuals use communication to express their identity (Jung & Hecht, 2004). More specifically, through their behaviors, word choice, and communicative style, people disclose their identity to others. For example, Jewish people might enact their Jewish identity through their accent, through their name or how they reference themselves, or by celebrating Hanukkah or Passover (Hecht, Faulkner, Meyers, Niles, Golden, & Cutler, 2002); likewise, a Jewish person may choose to down play his or her accent in circumstances where a Jewish identity is not appreciated or welcome. Narratives, similarly reveal identity through everyday talk in social interactions (Langellier, 1989). We enact our identities and learn about our views of self through the stories we tell. Furthermore, narratives about us told by others also influence our own and others' view of our identity (Sunwolf & Frey, 2001).

### *Identity is Multifaceted*

Given that people take part in multiple groups, have multiple relationships, and communicate with a variety of people in different situations, identities are multifaceted. An individual may develop multiple simultaneous identities based on his or her conception of self, including his or her own individual characteristics, such as traits, likes, and dislikes (Hecht & Faulkner, 2000; Tajfel & Turner, 1986). People also form

identities to fit the various relationships and roles they have. For example, a person could identify as a son and a brother while with his family, a friend during social interactions, and an employee while at work. In each of these situations, core aspects of a multi-faceted identity will emerge as an individual reveals his or her different identities and experiences verification.

### *Identity is Developmental*

As a final core characteristic of identity, I note that identity is inherently developmental (Shotter, 1993). Given the sheer number of identity roles a person may have throughout his or her life time, identities must develop. Erickson (1968) created the foundation of the developmental aspect of identity in his work on identity in childhood and adolescence. According to Erickson (1968), identity is grounded in the developmental changes a person goes through as that person transitions from childhood to adolescence to adulthood. The identities that one has as a child or young adult are often different from the identities one has as an adult. Furthermore, as life events occur, identities change. For example, the birth of a first child necessitates that the parents take on a new identity as mother or father.

To summarize, people develop their identities through group membership and relationships with others, and these identities are enacted and verified in interactions with others. People manage multiple identities by organizing them around salient core self-constructions. As relational partners develop their personal identities, they are able to construct their self-concept based on the verification and identity support they receive from each other. Thus, communication and social interactions help create, maintain, and reveal individual and social identities within relationships.

## Overview of the Current Project

As stated previously, the goal of this dissertation is to explore communication and the identity process during emerging adulthood. This chapter addressed different theories of identity and the role that communication plays in the identity process. Chapter 2 delves into the developmental perspective on identity, discusses identity during the period of emerging adulthood, and introduces the concept of identity uncertainty. Chapter 3 explores the nature of friendship and how communication with friends can affect the self-doubts and identity uncertainty people may experience during emerging adulthood; the chapter concludes with the hypotheses to be tested in the dissertation study. Chapter 4 presents the results of a pilot study and reports the reliability and validity of a new measure of identity uncertainty. Chapter 5 describes the methods and analyses for the main study in this dissertation, and Chapter 6 reports the results of that study. Finally, Chapter 7 discusses the results of this investigation, as well as strengths, limitations, and directions for future research.

## CHAPTER 2

Identities can change over the course of a life time. Group membership may change by choice (e.g., joining a new social group) or change may be forced (e.g., being fired from a job); in either case, a new identity will develop. The relationships that people maintain contribute to their identities, and as relationships change, so too do identities. A widower, for example, negotiates what it means to be living without a spouse. Because relationships change throughout individuals' lives, people are constantly developing and negotiating new identities. Moreover, life changes and the process of negotiating new identities may produce feelings of uncertainty about an identity.

To clarify how changes over the lifespan and life transitions affect and reflect changes in identities, this chapter examines developmental perspectives on identity. First, I discuss the developmental nature of identity during childhood and adolescence. Then, I present a theory that explores identity during early adulthood. Next, I explain the relationship between identity and emerging adulthood. In the final section, I introduce and explicate the construct *identity uncertainty*.

### Identity Development in Adolescence

Erikson (1968) and Marcia (1966) explored identity development in early to late adolescence. Erickson's theory of identity looks at identity as a bipolar dimension (Erikson, 1950, 1968). On one hand is identity synthesis, where a person has a consistent understanding of self (they know who they are in various situations, and they are the same person at different times and different places), and he or she is able to be responsible for their own decisions and life events. People also perceive that others recognize their "sameness." Additionally, the ego is developing within a social reality,

and the person is figuring out ways of relating to others and the various social and cultural systems (Erikson, 1958). On the other hand is identity confusion, where the person has a lack of self knowledge, little direction, and doesn't take responsibility for his or her behaviors. During identity confusion, a person is preoccupied with self, has excessive self awareness, and a sense of hopelessness. An identity is resolved when the identity synthesis is stronger than identity confusion (Erikson, 1958).

The theory of ego identity development suggests that before resolution of the identity can occur, an individual experiences an identity crisis, institutionalized moratoria, a struggle between ego and superego, and value orientation stages. Identity crisis comes about when there is tension between society's pressure for an individual to establish his or her identity and that individual's readiness to have an identity (Erikson, 1968). This often occurs in adolescence, when a person sees many roles at play in society, but cannot recognize the role that he or she will play. But during late adolescence, psychosocial processes occur which allow the individual to explore possible identity roles. A psychosocial identity includes a personal dimension, where the individual recognizes that behavior differentiates people, and a social dimension, where the individual recognizes the roles within a society (Erikson, 1968). If these components do not come together, an identity crisis will occur. The resolution of identity stage will occur when a relatively firm sense of ego identity is developed, when behavior and character become stabilized, and when community roles are acquired (Cote & Levine, 1987). An identity crisis is severe when the degree to which the sense of identity confusion gets in the way of the sense of identity ego (Erikson, 1958). If an individual

cannot resolve the crisis after several attempts, he or she may become aggravated (Erikson, 1968).

The identity statuses of diffusion and foreclosure are considered developmentally unsophisticated statuses in which the adolescent has not yet experienced an identity crisis (Marcia, 1966). Diffusion refers to uncertainty about the lack of commitment without the desire to explore alternatives. At this point, the adolescent does not recognize his or her identity roles and therefore has no need to feel committed to them or to explore other identity roles. Foreclosure refers to the commitment to beliefs and values of significant others (Marcia, 1966). When an adolescent reaches this status, he or she acknowledges his or her identity, but it is based on the beliefs and values of their parents or other close relations.

Institutionalized moratoria occurs when an individual is able to experiment with various values and role-related socialization experiences that help to develop an adult identity (Erikson, 1968). Erikson specified two value systems: technological ethos and humanistic ethos. The technological system provides socialization experiences needed to get by in mainstream technological society, which will help with identity crisis. These experiences include building skills and the ability to be productive. The humanistic system provides opportunities for experimentation with roles and values – when the individual's and society's values don't match, the identity crisis can be more severe. Humanistic ethos helps an individual meet society's values (Erikson, 1968).

Institutionalized moratoria mirrors the more sophisticated identity status of moratorium.

Moratorium refers to the active exploration of alternatives without firm commitment



(Marcia, 1966). At this point the adolescent has recognized an identity crisis and begins to explore other identity roles, but is not committed to any particular role.

The ego-superego struggle for power is a struggle over the individual's personality (Erikson, 1968). The more severe the struggle, the more severe the identity crisis. Eventually, a person's ego should dominate, suggesting that a person has integrated his or her personal beliefs and the perceptions of others.

Value orientation stages (Erikson, 1975) occur when the individual develops through three stages: moral, ideological, and ethical. The moral stage is categorical, absolute belief in authority. The ideological stage is an attempt for the individual to understand authority. The ethical stage is when the individual is aware that he or she is ultimately responsible for his or her actions. A higher value orientation stage is associated with a more severe identity crisis (Erikson, 1975).

The final identity status is achievement, which refers to commitment following a period of exploration. Once an individual has resolved his or her identity, he or she will experience commitment. Commitment, also called fidelity, is an important component of identity because it is deep commitments and loyalties to people and institutions. During adolescence, fidelity is considered a strength. Erikson (1968) suggested that identity development is not possible without periods of intense (but sometimes temporary) loyalty to individuals and ideas. To reach this status, the adolescent has resolved the identity crisis and is committed to an identity role.

Empirical research suggests that approximately half (55%) of early adolescents fall into one of the identity status categories (Allison & Schultz, 2001). Meilman (1979) found that most 12 and 15 year olds are either in diffusion or foreclosure, and that the

prevalence of these states decreases with age. As these adolescents get older, the prevalence of achievement status increases. Archer and his associates (1982, 1983) found similar results in children in grades 6, 8, 10, 12. The diffusion stage has been shown to be more prevalent in younger males, whereas the achievement stage is more prevalent in older males (Wires, Barocas, & Hollenbeck, 1994). Females generally score higher than males on moratorium (Jones & Streitmatter, 1987) and achievement (Streitmatter, 1988), and males are more diffused than females (Jones & Streitmatter, 1987). Adamson and Lyxell (1996) contended that adolescents experience a growing awareness of their identity in which their self-concept and existential questions help shape their view of self. For example, the formation of a gay or lesbian sexual identity occurs when a youth becomes aware of his or her unfolding sexual orientation, begins to question his or her sexuality, and explores his or her emerging sexual identity by becoming involved in gay-related sexual and social activities (Chapman & Brannock, 1987).

Other research has shown the effects of identity resolution. Adams, Ryan, Hoffman, Dobson, and Nielsen (1984) suggested that reaching identity resolution is associated with an over-compliance to peer pressure. How a person's identity stage is resolved in terms of integrating into community and being recognized as an adult shows that identity resolution is higher for females and the lower social class than males or the higher social class (Cote, 1997). Androgynous adolescents are better able to reach resolution than more feminine or masculine people (Della Selva & Dusek, 1984). Identity status is also related to academic autonomy, educational involvement, and mature interpersonal relationships (Berzonsky & Kuk, 2000).

## Identity Development in Early Adulthood

Whereas Erikson's work and the research associated with it focus on early to late adolescence, Arnett (2000) argued that identities continue to develop into a person's mid to late 20s. For example, research suggests that during the transition to college (Staton, 1993), people experience an identity crisis and must cope with changes in their identity. Chickering's (1969) theory of identity development explores identity development in late adolescence and early adulthood.

Chickering's theory of identity development (1969) is based on Erikson's identity formation stage. Like Erikson, Chickering and his colleagues (1993) believed that the stabilization of identity is a primary task for adolescents. Chickering's theory was developed for college students because of the numerous opportunities they have to explore identities while attending university. The theory involves seven vectors to college students' identity development; the vectors are not age specific, but based on individual life experiences. The primary vector is establishing identity, and all other vectors can be classified under this one. The original seven vectors of Chickering's (1969) theory were *developing competence*, *managing emotions*, *developing autonomy*, *developing identity*, *having freeing interpersonal relationships*, *having purpose*, and *having integrity*. After some criticism that the theory devalued the importance of interdependence in relationships, the vectors were revised (Chickering & Reisser, 1993). The following paragraphs describe the vectors, including the changes made to the original vectors.

The first vector is *developing competence*. Chickering (1969) argued that there are three competencies: intellectual, physical and manual, and social. If an individual has a sense of competence in all three areas, he or she will succeed in class, be comfortable

with his or her physical abilities, and be confident that he or she can behave appropriately in numerous social situations. *Managing emotions* is the second vector. During this phase, the individual will develop an awareness of his or her emotions (for example, sexuality and aggression). The person will also develop the appropriate methods for dealing with and expressing their emotions.

The third vector is *developing autonomy*, which was renamed *moving through autonomy toward interdependence*. In this stage, the individual becomes independent and learns to be interdependent. He or she will rely less on others for reassurance (emotional independence), and will become better able to handle the tasks of everyday life (instrumental independence). At this point, people should recognize the need for both autonomy and interdependence with others. A person should understand that it is important to be self-sufficient, while recognizing the value of interdependence and community as important as well. The fourth vector is *developing identity*. Here, a person should develop a solid sense of self and self-acceptance. In this stage, the person may deal with issues such as comfort with gender, sexuality, and ethnic/cultural background.

The fifth vector, *having freeing interpersonal relationships*, was later moved ahead of developing identity and renamed *developing mature interpersonal relationships* because Chickering and Reisser (1993) recognized that an individual's relationships play a role in his or her identity development. This vector suggests that as people develop a firm sense of identity, their relationships are characterized by more trust, independence, and individuality. In this stage, the individual will also develop intimacy, tolerance, and acceptance of differences in their friends and people from different backgrounds and cultures.

*Having purpose* is the sixth vector. In this stage, the individual should begin to set goals for their future. These goals should integrate their career, relationships, and lifestyle preferences. The final vector is *having integrity*. At this point, it should be clear to individuals what their personal value system is, and that they are able to behave in a manner consistent with their personal value system.

Chickering and Riesser (1993) suggested that people work on the first vectors during their first two years of college and work on the last vectors during the latter part of their college career. Chickering and Riesser also recognized that, depending on personal circumstances, people may need to recycle through the vectors. Although most students will work their way through once, some students may need to revisit certain vectors.

Empirical research shows support for Chickering's theory of identity development. Several scholars have looked at how these vectors affect identity development and satisfaction with the college experience. For example, Lounsbury and his colleagues found that a person's sense of identity was related to his or her overall life satisfaction and satisfaction with specific aspects of the college experience (Lounsbury, Saudargas, & Gibson, 2004; Lounsbury, Saudargas, Gibson, & Leong, 2005), which supports Chickering and Reisser's assumption that identity is important for college students.

Other studies have found that academic autonomy, purpose, and mature interpersonal relationships are related to moral maturity in identity development (Buess & Pearson, 2000). Developing interpersonal relationships seems to be very important to the identity development process. For example, students with higher levels of extraversion and agreeableness are more likely to develop the mature interpersonal

relationships that are needed for identity development (Clancy & Dollinger, 1993), identity status is related to mature interpersonal relationships (Berzonsky & Kuk, 2000), and the development of personal relationships is critical to identity development in college students (Buess & Pearson, 2000). In addition, first generation American college students' identity development has been linked to their understanding of their cultural and ethnic background (Alessandria & Nelson, 2005).

Erikson (1968) and Chickering (1991) both indicated that identity is developmental. Erikson and Marcia's (1966) work focuses on changes in identity during adolescence, but they do not ignore that changes may also occur in late adolescence to early adulthood. Chickering focused on changes in identity during early adulthood, and empirical evidence suggests that individuals do experience identity development during this time. In the following section, I consider a relatively new line of inquiry that looks specifically at the phase of life called emerging adulthood (Arnett, 2000).

#### Identity and Emerging Adulthood

Emerging adulthood involves a developmental period of life during which individuals experience a change in autonomy as they move away from their family, but struggle with the challenges of adulthood. According to the theory of emerging adulthood (Arnett, 2000), a person's identity undergoes substantial changes during this time. Specifically, individuals explore a variety of possible life directions in domains such as love, work, and worldviews. Arnett (2000) argued that the period of emerging adulthood is distinct demographically, subjectively, and in terms of identity exploration. This section explores the demographic, subjective, and identity related distinctions that characterize emerging adulthood.

### *Demographic Variability*

Changes in recent decades in the timing of marriage and parenthood have created the period of emerging adulthood (Arnett, 2000). Postponing the transitions to marriage and parenthood allows people in their late teens and early twenties time to explore the various life directions they could take. Most people in the age ranges before and after emerging adulthood are demographically normative. In adolescence, most individuals live at home with their parents, are unmarried, do not have children, and are enrolled in school (U.S. Bureau of the Census, 2000). By age 30, most individuals are married, are parents, and are not enrolled in school (U.S. Bureau of the Census, 2000). In between these two time periods, there are no normative demographics. During this time, emerging adults tend to be “roleless,” so they can engage in a wider range of possible activities than people in other age ranges (Arnett, 2000). During emerging adulthood, a person’s residential status will change more than other age group (Arnett, 2000), and living arrangements include living with parents, on their own, with a romantic partner, with a nonromantic roommate, or in a college dorm. Time in school also varies for emerging adults. Although most emerging adults do not obtain a degree from a four year university, many of those who do are likely to go on to graduate school. Because there is so much demographic diversity and instability during the emerging adult years, this group has life experiences that no other groups do.

### *Subjective Ambiguity*

Emerging adulthood is distinct subjectively compared to other times in life (Arnett, 2000). During this period, individuals recognize that they are not adolescents anymore, but they do not feel as though they are adults. When asked if they feel they

have reached adulthood, the majority of Americans in their late teens or early twenties answer “in some respects yes, in some respects no” rather than either “yes” or “no” (Arnett, 1994). Notably, this self-assessment is not due to the emerging adult’s lack of stable residence, relationship, or job; research shows that these demographic transitions are ranked as having little importance in terms of reaching adulthood (Arnett, 1997). Rather, emerging adults name the top two criteria for reaching adulthood to be accepting responsibility for him or herself and making independent decisions (Arnett, 1997). Arnett suggests that only after individuals have met these criteria do they experience a subjective change in their development status of moving from emerging adulthood to young adulthood.

### *Identity Development*

Emerging adulthood is a distinct time for identity development, specifically in the domains of love, work, and worldviews (Arnett, 2000). Although Erikson (1968) suggested that identity development occurs during adolescence, he does recognize that adolescence could last into a person’s twenties. Arnett argues that most identity exploration takes place in emerging adulthood, rather than adolescence, because identity achievement is rarely reached by the end of adolescence and continues through the late teens and into the twenties (Valde, 1996). In terms of love, work, and worldview, each of these processes begins in adolescence but takes place mainly in emerging adulthood.

Romantic relationships occur in adolescence for some people; for most people, it is not until emerging adulthood that these relationships become serious (Arnett, 2000). For example, most people begin to date in their adolescents, but they do not develop serious relationships or consider marriage until they are much older (Padgham & Blyth,



1991). During emerging adulthood, romantic relationships become more intimate and serious than in adolescence, and they are more likely to include sexual intercourse and cohabitation (Michael, Gagnon, Laumann, & Kolata, 1995).

With regard to work, many adolescents hold part time jobs; however, they are employed in the service industry to make money to either support their education or their leisure activities (Arnett, 2000). Emerging adults, on the other hand, have work experiences that will prepare them for their adult work roles. During this time, emerging adults begin to learn what type of work they are good at, what type of work would be satisfying to them, and what their chances of getting a job in the field that best suits them are (Arnett, 2000). Emerging adults are able to change their jobs many times to find the job best suited for them.

In terms of worldview, emerging adults often enter college with a worldview they learned in childhood and adolescence. Upon reaching college, they are exposed to a variety of worldviews, and they often begin to question their own worldviews (Perry, 1999). Throughout college, emerging adults are able to examine a variety of worldviews and often leave college with a new worldview (Arnett, 2000). Emerging adults who don't attend college are also likely to change their world view (Arnett, 1997).

#### *Identity Exploration and Risky Behavior*

One other characteristic of emerging adulthood that makes this period qualitatively different from other periods is the likelihood of engaging in risky behavior, which Arnett (2000) believes stems from identity exploration. Engaging in risky behavior offers emerging adults novel and intense experiences. Emerging adults are also able to engage in these experiences more easily than adolescents because of the lack of parental

supervision and fewer role constraints (Arnett, 2000). As detailed in the paragraphs that follow, risky behavior takes several forms until emerging adults have an established career and take on the responsibilities associated with marriage and parenthood.

Research shows that emerging adults are more likely than high school students to be sexually active and engage in casual sex (Arnett, 1998). College students are also more accepting of casual sex and feel less guilty about engaging in sex than younger individuals (Chara & Kuennen, 1994). Lefkowitz (2005) found that during the transition to college, emerging adults reported having sex for the first time, becoming more promiscuous, experimenting with sex more, viewing sex as less of a big deal, experiencing more exposure to sex, and becoming more accepting of sex. Because these changes in sexual behavior and attitudes often occur before emerging adults establish long-term or marital relationships, this period may be a time of sexual exploration (Arnett, 2000).

Substance abuse is also common among emerging adults. The 2006 National Survey on Drug Use and Health, which asked about behavior in the past month, found that almost 70% of 18-25 year-olds had used alcohol in the past month, which was more than any other age group surveyed (Substance Abuse and Mental Health Services Administration [SAMHSA], 2008). Binge drinking was highest among 21 to 25 year olds, followed by 18 to 20 year olds. SAMHSA also reported that 18 to 20 year olds had the highest illicit drug use in the past month, followed by 21 to 25 year olds. Another study found that nearly 10% of college students had used ecstasy in their life time, 7% had used within the past year, and 3% within the past month (Boyd, McCabe, & d'Arcy, 2003).

Another potential risk factor related to identity exploration in emerging adulthood is a decline in the quality of familial relationships (Arnett, 2000). Research has shown that emerging adults who have the most frequent contact with their parents report a decrease in the quality of their relationship with their parents. Emerging adults also suffer from tensions related to autonomy. During this period, individuals try to separate themselves from their families, but still rely on their families for many things. Research shows that emerging adults frequently lie to their parents about friends, dating, and money, but justify their behavior as a way to assert their right to autonomy (Jensen, Arnett, Feldman, & Cauffman, 2004). Moving away from their parents can also cause separation anxiety for some emerging adults (Bartle-Haring, Rosen, & Stith, 2002). Furthermore, a parent's response to the separation may influence the identity development of their emerging adult child. Bartle-Haring and colleagues found that the more anxiety the mother had about the separation, the more confusion the emerging adult child had about identity issues; the more anxiety the father had, the more confusion the emerging adult child had about identity issues and the lack of commitment to identity issues.

Taken together, the characteristics that make emerging adulthood a distinct period of time may also create a feeling of uncertainty for people experiencing these changes. Demographically, emerging adults may feel uncertain about their role requirements as they transition from living at home to living at university, from moving away from university to finding a first job, or from moving from one job to another. Subjectively, emerging adults may experience uncertainty about not identifying as either an adult or an adolescent, because they are unsure of who they are and what they should be doing.

People also experience major developments in their identity during emerging adulthood, and they are likely to engage in risky behavior. In fact, Arnett (2000) suggested that substance abuse may be used as a way of coping with the uncertainty related to the changes in the emerging adult's identity. In the following section, I propose identity uncertainty as a specific concept that can illuminate experiences during emerging adulthood.

### Identity Uncertainty

Scholars have explored both the psychological and sociological perspectives of identity, the development of identity, and communication as part of the identity process. I propose that as identities develop over the lifespan, people also experience uncertainty about facets of their identity. Based on Erikson's (1968) stages of identity resolution and the moratorium status described in Marcia's (1966) identity statuses, uncertainty about identity occurs. According to Erikson, when an individual experiences an identity crisis, he or she experiences pressure from society to acquire an identity. That pressure may force an individual to embrace an identity that may or may not suit him or her, thereby causing feelings of uncertainty. During the institutionalized moratorium stage, individuals experiment with different identities. Experimenting with an identity that causes discomfort may lead to feelings of uncertainty. Marcia's moratorium status is described as searching for identity-defining commitments in ways that can cause anxiety (Kroger, 2003) and being skeptical about knowing anything with certainty (Boyes & Chandler, 1992). As a result, individuals experiencing moratorium may experience feelings of uncertainty. Thus, a person's identity can further be explored by expanding

the conceptions of identity to include the uncertainty people may have about their identity.

### *Uncertainty Conceptualized*

According to uncertainty reduction theory (URT; Berger & Bradac, 1982; Berger & Calabrese, 1975), uncertainty refers to a lack of confidence about how a communicative act will proceed, based on an individual's subjective sense of the number of possible alternative ways an interaction partner might behave (Bradac, 2001).

Uncertainty occurs when an individual is incapable of explaining, describing, and predicting a behavior within an interaction (Berger & Bradac, 1982; Berger & Calabrese, 1975). According to URT, uncertainty can exist within the self, the partner, and the relationship. *Self uncertainty* occurs when individuals are unable to explain, describe, and predict their own behavior or attitudes (Berger & Bradac, 1982; Berger & Calabrese, 1975). This inability is rooted in not knowing whom oneself is (Berger & Bradac, 1982). *Partner uncertainty* arises when an individual is unable to explain, describe, and predict an interaction partner's behaviors or attitudes (Berger & Bradac, 1982; Berger & Calabrese, 1975). Partner uncertainty is likely to occur when a person lacks knowledge about a partner's attitudes, values, and preferences (Berger, 1979). *Relationship uncertainty* arises when people experience doubts about the relationship itself (Berger & Bradac, 1982), such as when the state of the relationship is in question.

URT was originally applied to initial interactions between strangers (Berger & Calabrese, 1975); however, scholars have since explored the uncertainties that occur in other communication contexts. Uncertainty is measured differently within these contexts. For example, within health contexts, uncertainty takes the form of illness uncertainty

(Babrow, Kasch, & Ford, 1998; Sheer & Clive, 1995), relational uncertainty, medical setting uncertainty (Sheer & Cline, 1995), patient-clinician uncertainty, and healthcare delivery uncertainty (Begon & Kaissi, 2005). In work settings (Douglas, 1990; Sunnafrank, 1986) and computer-mediated communication contexts (Mäkitalo, Weinberger, Häkkinen, Järvolä, & Fischer, 2005; Ramirez, Walther, Burgoon, & Sunnafrank, 2002; Tidwell & Walther, 2002), uncertainty has been examined with respect to information-seeking behavior and self-disclosure. Finally, uncertainty in ongoing romantic relationships has been conceptualized as questions about the nature of involvement in the partnership (Knobloch & Solomon, 1999).

Although URT suggests that uncertainty can occur in the self, the partner, and the relationship, much of the current empirical evidence focuses on other-perceptions (e.g., Afifi & Burgoon, 1998; Kramer, 1999). Measures of partner uncertainty typically consist of questions about the participants' confidence in predicting his or her partner's attitudes or behaviors (Douglas, 1991). Similarly, relationship uncertainty is measured using questions about the participant's confidence in predicting his or her partner's current description of, and future visions for, the relationship (Knobloch, Miller, Bond, & Mannone, 2007). According to the theory, however, people also make proactive and retroactive attributions about their own behavior, beliefs, and attitudes (Berger & Bradac, 1982). In other words, self-perceptions are just as likely to be subject to uncertainty as other-perceptions.

Self uncertainty is conceptualized as part of URT, but it is not elaborated upon within the initial statement of that theory. Self-uncertainty, however, does emerge explicitly or implicitly in other areas of uncertainty experiences. For example, the

relational turbulence model identifies self uncertainty, alongside partner and relationship uncertainty, as the doubts about the nature of involvement in a relationship that can emerge during relationship transitions (Solomon & Knobloch, 2004). Uncertainty management theory (Babrow, Hines, & Kasch, 2000) suggests that people suffering from an illness appraise the consequences of reducing uncertainty and associate the appraisal with an emotional response (Brashers, Neidig, Reynolds, & Haas, 1998). The theory posits that before understanding the efforts to reduce uncertainty about external issues, a person must reduce self uncertainty. Finally, problematic integration theory suggests that when there is a disconnect between the probability and evaluation of an event, an individual is likely to experience heightened uncertainty (Babrow, 1992). Although none of these perspectives considers uncertainty about identity explicitly, they indicate that self-doubts and questions about personal motives are integral to the uncertainty phenomenon.

#### *Facets of Identity Uncertainty*

Scholars have typically identified specific foci of uncertainty within various domains of inquiry. For example, Berger and Calabrese (1972) suggested that uncertainty emerges during relationship initiation because uncertainty exists within the self, the partner, and the relationship. Within health contexts uncertainty arises about illnesses (Babrow et. al, 1998; Sheer & Clive, 1995), the medical setting (Sheer & Clive, 1995), and patient-physician relations (Begon & Kaissi, 2005). Similarly, identity uncertainty can focus on different issues. Because the self is composed of multiple identities, considering the different facets of identity can contribute to a more complete understanding of identity uncertainty.

The most specific articulation and measurement of facets of self is embodied in Crocker, Luhtanen, and Cooper's (2003) contingencies of self-worth scale. Crocker's (2002) program of research focused on identifying the goals for identity that are linked to self-worth. Accordingly, contingencies of self-worth "represent the domains in which self-esteem is threatened by setbacks and failures" (Crocker et al., 2003, p. 894). Crocker, Sommers, and Luhtanen (2002) argued that when people fail at goals that are linked to their self-worth, they may suffer an extreme fluctuation in their self-esteem. Although this line of work has focused on identifying aspects of self that are tied to self-esteem and the conditions under which people may focus on protecting their self-esteem (Crocker & Park, 2003), it also delineates a variety of specific and potentially important facets of a person's identity.

In total, Crocker et al. (2003) proposed seven domains of contingency that are important sources of self-esteem. *Others' approval* focuses on a person's need for others to view him or her in a positive light. *Appearance* addresses the extent to which people evaluate themselves in terms of physical appearance. A third facet, *competition*, suggests people derive self-esteem from being superior to others, or outdoing them in competition. Fourth, Crocker et al. (2003) identified *academic competence* as a facet of self that may be relevant throughout a person's scholastic life. *Family support* is related to affection from close others and the self-esteem that people may derive from relationships with their family members. A sixth facet, *virtue*, is the facet of self grounded in being a moral, good, and worthwhile person. Finally, because religion is important for many people, *God's love* may create a positive sense of self-worth to the extent that a person feels worthy of love.



Research on emerging adulthood points to other facets of the self not described by Crocker et al., which may also be relevant during this period of life. *Friend support* is related to the emotional (e.g., intimacy, acceptance, self-esteem), cognitive (stimulation, information), and material (e.g., help with tasks, tangible support) support (Solano, 1986) provided by friends, and is significant because friendships are more numerous, intense, and intimate than many other relationships reported by college students (Bercheid, Snyder, & Omoto, 1989). Because individuals with high levels of communication apprehension earn lower grades (McCroskey & Anderson, 1976), are viewed as less competent (McCroskey & Leppard, 1975), and experience lower self-esteem (Adler, 1980), *communication competence* is another facet. *Physical shape* is related to identity uncertainty because participation in physical activity (Sonstroem, 1984), and perceptions of self-concept in the physical domain (Fox, 1992), are associated with self-esteem among college students. Because universities offer access to multiple ethnic groups, the transition to college might be a time during which a person's ethnicity is especially salient; thus, *ethnicity* is a facet of identity subject to uncertainty. Finally, *sexuality* is a facet of the self because sex, sex-related issues, and sexual identity are among some of the topics that young adults question during emerging adulthood (Arnett, 2000; Lefkowitz, 2005).

Individuals might experience uncertainty about any of the particular facets that can contribute to self-worth. According to Markus's self-schema theory (1977, 1983), the degree of self-knowledge on specific facets of identity can vary. Based on self-schemas, people respond to information that matches their expectations and views of themselves (Markus, 1977). Moreover, self-schemas are used to interpret incoming information and

guide behavior (Markus, 1983). As a result, people are more certain of themselves with respect to qualities tied to self-schemas, and they have less knowledge of facets of identity that are not related to self-schemas. As emerging adulthood exposes people to experiences for which they lack relevant self-schema, identity uncertainty – both in general and with respect to particular facets of identity – may become pronounced.

To summarize, Crocker et al.'s (2003) conception of contingencies of self-worth, along with the additional facets specified above, highlights a diversity of topics that can be important to a person's self-concept. Although not explicitly stated, evidence suggests that people may experience feelings of uncertainty, both in general and with respect to these facets of self-worth. Thus, identity uncertainty is defined as the extent to which people are unsure about the qualities that they possess. People may be more or less certain about where they stand with respect to the different facets of their identity, especially as they undergo the unique experiences that define emerging adulthood.

### Conclusion

Identity is a developmental process that begins in childhood, and continues throughout the lifespan. During emerging adulthood, individuals shed the identities of their youth, and begin to explore the identities they take on as adults. The characteristics of emerging adulthood may create feelings of uncertainty for people experiencing issues related to their changing identity. Given that the self is multifaceted, people may experience uncertainty about an array of different facets that can be important to a person's self-concept. Thus, identity uncertainty, which may be heightened during emerging adulthood, is defined as the extent to which a person is unsure about the qualities that he or she possesses.

## CHAPTER 3

All communication experiences involve the creation and negotiation of identity; in this dissertation, I focus specifically on communication within friendships. Friendships have an unusual social position in Western society (Fehr, 1996; Rawlins, 1992). Unlike family, friendships are voluntary and privately negotiated (Rawlins, 1992); unlike marriage, friendships are not formally recognized as a legal institution, and they may be dissolved by the unilateral decision of one partner (Fehr, 1996). Despite this tenuous position, people are socialized to hold expectations about friendships (Samter & Cupach, 1998). Friendships serve as important relationships across the lifespan, beginning with childhood and continuing through older adulthood (Bliezsner & Adams, 1992; Hartup, 1996). Friendships may last for decades, and some only end because of death. For individuals with poor family ties or no family at all, as well as those who are not engaged in romantic relationships, friends may serve as family and as people to turn to in time of need and celebration. People with friends tend to be more satisfied with life, and they are healthier both mentally and physically (House, 2002). Given that most people have a least one friend, friendship is a relationship that touches many people.

This chapter focuses on the nature of friendship, friendship during emerging adulthood, and the effects of communication with friends on identity uncertainty. More specifically, I present friendship from a lifespan perspective, discuss the process of friendship formation and maintenance, and describe the dialectical tensions experienced in friendships. Next, I report the benefits of friends during emerging adulthood. Then, I describe how communication with friends during emerging adulthood may have bearing on identity uncertainty. Based on this review of the literature, I present hypotheses and

research questions concerning communication with friends and identity uncertainty during emerging adulthood.

### The Nature of Friendships

Friendship is commonly defined as “voluntary interdependence between two persons over time, that is intended to facilitate social-emotional goals of the participants, and may involve varying types and degrees of companionship, intimacy, affection, and mutual assistance” (Hays, 1988, p. 395). There are several important premises in this definition. First, people are seen as goal-directed and active in pursuing their friendships (Miell & Duck, 1989). Second, because the goals vary for different friendships depending on individual characteristics (e.g., age, sex, personality), the type or degree of intimacy in the friendship, and environmental factors such as existing social networks and opportunities for friendship formation and maintenance, there is no correct or universally ideal type of friendship (Altman, Vinsel, & Brown, 1981). Third, friendship is multidimensional (LaGapia, 1977); in other words, it is expressed behaviorally, cognitively, and emotionally (Hays, 1984). Finally, friendship is a process; the individuals who make up the dyad and the dyad itself are continually progressing (Duck & Sants, 1983; Hays, 1985). To provide an overview of friendship, this section examines the literatures on friendship across the lifespan, friendship formation, friendship maintenance, and relational dialectics within friendship.

#### *Friendships across the Lifespan*

The idea that friendship is a process is evident in the fact that friendships change throughout the lifespan. For example, young children prefer a playmate with whom time is spent (Howes, 1983), whereas adolescents prefer friendships with intimacy and loyalty

(Sullivan, 1953), mutual trust, loyalty, and exclusiveness (Berndt, 1983; Sharabany, Gershoni, & Hoffman, 1981; Youniss & Smollar, 1985). Moreover, intimacy becomes more important to friendships as a child ages (Berndt, 1982; Hartup, 1993). For example, scholars have found that there is an age related shift in intimacy from activity-based interactions to self-disclosure in late middle childhood (Selman & Yeates, 1987; Sharabany et al, 1981). Also, older children are more able to distinguish between friendship and acquaintanceship (LaGapia, 1979). Between ages of 8 to 10, children start to show loyalty and concern for the welfare of their friends (LaGapia & Wood, 1981).

In 18-25 year olds, friendship is more intense and takes up more time than in later years (Argyle & Henderson, 1985). Emerging adults' narratives of friendship contain more self-disclosure and fewer shared activities than early adolescents' narratives (Radmacher & Azmitia, 2006), and adults typically identify self-disclosure as the most important behavior in establishing and maintaining a sense of intimacy in friendship (Fehr, 2004).

Older adults tend to have more complex and multidimensional friendships than middle age or younger ones (Weiss & Lowenthal, 1975), although people in adult friendships value the same qualities in a friendship as other age groups (Blieszner, 2000). For example, emotional, instrumental, and informational support are important in adult friendships (Armstrong & Goldsteen, 1990), and adults characterize friendship as having someone to talk to and depend on, and having someone to have fun with (Rawlins, 1992). Friendships often change because of life transitions that occur in adulthood. For example, child-rearing responsibilities for children and grandchildren can leave little time and energy for friends (Baydar & Brooks-Gunn, 1998) and retirement can also affect

friendships (Shea, Thompson, & Blieszner, 1988). Declining health and decreased mobility may also affect friendships in adulthood (Chown, 1981). At the same time, Reisman (1981) argued that older adults may see greater value in friends, as family and career responsibilities diminish.

### *Friendship Formation*

According to Fehr (2000), several factors allow friendships to occur, including those that exist in the environment, individual, situation, and dyad. Environmental factors usually refer to the physical proximity between acquaintances – people usually form relationships with those who are physically close to them. Environmental factors also include becoming friends because two people belong to the same church or work together. Individual factors include physical attractiveness, social skills, and responsive to the friendship. Situational factors are the probability of future contact, frequency of interactions, and the availability of a potential friend. Fehr (2000) suggested that these factors can either facilitate or hinder the formation of a friendship. Dyadic factors include similarity of potential friends, reciprocity of liking, and intimacy of self-disclosure.

Many scholars agree that it is through the process of self-disclosure that people become friends (e.g., Fehr, 2000). Self-disclosure is the process through which one person tells another about his or her intimate feelings, attitudes, and experiences. Self-disclosure usually begins with superficial interaction in specific areas and moves toward increasingly intimate interaction about a greater variety of topics (Altman & Taylor, 1973). With these changes in self-disclosure, interactions become more meaningful. People decide how much to self-disclose to each other based on rewards and costs. Norms also affect self-disclosure because revealing too much information too soon can

put people off, but not revealing enough personal information may lead to a lack of trust between partners. According to Altman (1973), immediate reciprocity may be necessary in the early stages of relationship development for a person to prove that he or she is trustworthy and to move the relationship into more intimate stages.

The development of intimacy and self-disclosure parallel each other in friendships (Rawlins, 1992). Attraction occurs when nonintimate topics are disclosed initially, more intimate topics are eventually introduced, and this pattern is reciprocated (Archer & Burleson, 1980). As a friendship progresses, communication patterns become more personalized, synchronized, and efficient (Knapp, Ellis, & Williams, 1980), and norm deregulation begins to occur (e.g., dropping by unannounced and using a person's belongings become acceptable; Rands & Levinger, 1979). Differences in behavior between friends and acquaintances also exist, such that interactions between friends are more relaxed, friendly and casual; use more informal language; and include teasing and joking (Jerrome, 1984). Self-disclosure contributes to friendship satisfaction for males and females (Jones, 1991); therefore, it is a necessary feature of friendships.

### *Maintenance of Friendships*

Friendships are maintained based on rules that govern interactions within friendships (Argyle & Henderson, 1984). These rules guide partners' behavior toward each other and, when followed, allow friends to maintain involvement and minimize conflict within the friendship (Argyle & Henderson, 1986). According to Argyle and Henderson (1984), rules such as reciprocation of benefits (e.g., whether and when assistance should be given a friend), intimacy (e.g., what information should be shared between friends), the degree of affect that should be expressed, and boundaries of the

relationship (e.g., whether friends should interfere with in each others' outside relationships) exist within friendships.

Research also suggests that friendships develop and are maintained based on the perceived importance of communication skills (Burlleson, Samter, & Lucchetti, 1992). These communication skills include *comforting*, which is the ability to make others feel better when sad, depressed, or upset; *ego support*, which is the ability to make other feel good about themselves; *conflict management*, which is the ability to reach mutually satisfying solutions in conflicts; *persuasion*, which is the ability to get others to modify their thoughts and behaviors; *referential or informative skill*, which is the ability to convey information clearly and unambiguously; *regulative skill*, which is the ability to help someone effectively fix a norm that has been violated; *narrative skill*, which is the ability to entertain through jokes, gossip, and stories; and *conversational skill*, which is the ability to initiate, maintain and end pleasurable casual conversation (Burlleson & Samter, 1990).

These skills can be categorized as affectively-oriented communication skills (i.e., comforting, conflict management, ego support, and regulative skills) and behavior-oriented communication skills (i.e., persuasion, referential, narrative, and conversational skills). Studies show that people who possess affectively-oriented communication skills are more likely to be attracted to each other (Burlleson & Samter, 1990) and perceive these skills as important for a friend to possess (Burlleson, Kunkel, Samter, & Working, 1996). Furthermore, because friends are viewed as primary sources of emotional support (Tesch, 1983), and a significant part of friendship involves the discussion, exchange, negotiation, and understanding of feelings (Rawlins, 1989), individuals are more likely to



be attracted to people who have affectively-oriented skills. Within adult friendship, affectively-oriented forms of communication allow partners to explore, evaluate, and validate themselves and their emotions (Samter, 1992).

Young adults view friendships as a source of intimacy, which involves reciprocally sharing personal information, providing emotional support, and exploring feelings (Tesch, 1983), and they see discussing feelings, hopes, plans, achievements, and worries as a primary activity engaged in by friends (Aries & Johnson, 1983). Consequently, the ability to talk about feelings and expectations in a similar way and on a similar level is what enables friendships to form and persist (Burleson & Samter, 1996). In general, research suggests that people are more likely to enjoy their interactions and develop intimate friendships with each other if they have similar views about what communication skills their friends should possess (Burleson et al., 1992).

### *Friendship Dialectics*

Rawlins (1992) suggested that in order for friends to maintain their relationship, they must be able to work through the dialectics that threaten friendships. A dialectic is an opposing force or tension between seemingly contradictory needs. Relational dialectics are tensions that occur within different types of relationships, and they are a normal occurrence within close associations (Baxter, 1988). Rawlins considered the dialectics that characterize friendships, in particular, and he concluded that friends face both contextual and interactional dialectics.

Contextual dialectics consist of the private/public and ideal/real dialectics. The private/public dialectic highlights how friendship is publically marginalized compared to other relationships, which leaves the norms for the relationship to be privately negotiated.

Appropriate behavior for the friendship is determined by the dyad, but judged by the public. Also, friends serve both public and private needs; for example, when a co-worker becomes a friend, the friendship is privately negotiated even though the role of co-worker is publically defined. Given the double agency of friendship, people may find it difficult to determine if they will be criticized or appreciated for stressing the public or private aspects of a friendship. The ideal/real dialectic recognizes that people have certain ideals that they associate with friendships; specifically, friendships should be voluntary, equal, mutual, and affective. If a friend does not meet these ideals, the friendship might not last. In reality though, a friendship involves obligations, may not be equal or mutual, and is sometimes characterized by conflict. This tension between ideal and real notions of friendship creates a dialectic with which partners in friendships must grapple.

The interactional dialectics consist of independent/dependent, affectionate/instrumentality, judgment/acceptance, and expressive/protective. The independent/dependent dialectic emphasizes how friends should support each others' need to be independent, but people are also allowed to ask a friend for help and to expect that friend to be available in times of need. The affection/instrumentality dialectic suggests that friends should fulfill needs for love, emotion, and feeling needed, but friends can also be expected to serve as a means to achieve more instrumental goals. The judgment/acceptance dialectic highlights the fact that friends can evaluate and criticize each other, but friendships are also a place where people should feel free to be themselves. The last dialectic is the expressive/protective dialectic, which focuses on how self-disclosure is a necessary part of maintaining friendships, but there is also a boundary between what should and should not be said to a particular friend.

The dialectical perspective suggests that healthy relationships experience changes and fluctuations associated with dialectical tensions (Baxter, 1994). Friendships need to be reevaluated and redefined because the impact of each dialectical force changes as the relationship progresses. The relationship will only progress when some element of the tension is resolved or overcome. In fact, Baxter (1992) argued that it is the experience and transformation of dialectical tensions that engage people in their relationships. As long as friends are able to manage the tensions they will face based on these dialectics, they should be able to maintain their friendships.

To summarize, friendship is a unique relationship. It is a relationship that is present, though changing, throughout the lifespan. Self-disclosure is essential to the formation and maintenance of friendship; it creates intimacy and closeness, and it is a source of relationship satisfaction. Friendship rules and communication skills are also necessary for friendship maintenance. Rules establish norms and expectations within a friendship, and friends who share similar communication skills enjoy each others' company. Although friendship dialectics can threaten a relationship, people who are able to manage the tensions created by the dialectics are able to maintain their friendships. Across the literatures focused on friendship across the lifespan, friendship formation and maintenance, and friendship dialectics, communication with friends was revealed to help people transcend life stages, cement new and continuing relationships, and manage the tensions and ambiguities that emerge over time.

### Friendships During Emerging Adulthood

Research focused on emerging adulthood shows that friends play an especially significant role during this period of time. Young adults who lack friends suffer from

emotional maladjustment (Waldo & Fuhrman, 1981), develop more physical symptoms (Moos & VanDort, 1976), and have lower grade point averages (Pace, 1970) than young adults who have friends. For college students, friends are people with whom they exchange intimacies, share important parts of themselves, reciprocally provide emotional support, and explore feelings (Rawlins, 1989). Tesch and Martin (1983) found that dependability, caring, commitment, and trust were the most highly valued aspects of friendship for college students.

Emotionally close, intimate friendships can provide important developmental opportunities for adolescents and emerging adulthood. Friends are a primary source of psychological and emotional support (Furman & Buhrmester, 1992). More specifically, friendships create a secure environment or “comfort zone” in which individuals can explore and validate their identities (Call & Mortimer, 2001; Elliot & Feldman, 1990). Accordingly, Gottman and Mettetal (1987) reported that the primary goal of friendship in adolescence is understanding the self. Likewise, Samter (2003) argued that traits and competencies develop within a friendship. People also expect honest evaluations from friends (Hanna, 1998), which helps individuals with identity development.

Support from friends occurs during emerging adulthood because of an increase in closeness compared to adolescence. Research shows that during the course of adolescence and into emerging adulthood, males and females increasingly emphasize intimacy within their friendships (Berndt, Hawkins, & Hoyle, 1986; Buhrmester, 1996; Laurensen, 1996). They also view friendship as an intimate relationship based on mutual support, reciprocity, concern, and understanding. This increased intimacy and understanding creates an atmosphere conducive to supportive communication.

Supportive communication may be especially important for emerging adults because these individuals know that they are responsible for deciding their future, but are unlikely to have an internal belief system that allows them to do so (Arnett, 2000). Consequently, they often need guidance from others, and many emerging adults turn to their friends for support. During emerging adulthood, individuals are more likely to turn to friends than other people for help and advice during times of distress (Buhrmester, 1990). Young adult same-sex friends value affect management communication skills, and the quality of a friendship depends on giving and receiving sensitive and effective support messages (Samter & Burleson, 1990).

Given that emerging adulthood is a time of change and uncertainty, having a network of friends is necessary to cope with the stress experienced during this time. Emerging adults seek out advice and support from friends, more so than from other relationships. The benefits of having friends during emerging adulthood suggest that friends play a noteworthy role in the lives of emerging adults.

### Hypotheses

As indicated in Chapter 1, communication plays a vital role in the identity process. In Chapter 2, I argued that people may experience uncertainty about an identity. In this chapter, I discussed the significance of friends during emerging adulthood, when uncertainty about identity may especially prevalent. In this section, I propose seven hypotheses that address the relationship between identity uncertainty and subjective well-being; the impact of communication with friends and identity uncertainty; and the relationship between willingness to self-disclose and identity uncertainty.

*Identity Uncertainty and Subjective Well-being*

According to the communication theory of identity (Hecht, 1993), identities are enduring, changing, and emergent. Chickering's theory of identity development (1969) and Arnett's (2000) theory of emerging adulthood also suggest that identities emerge and change over time. Identities are a source of expectation and motivation, and an inability to meet the expectations associated with an identity can be stressful. Emerging adulthood is a phase in which individuals are unclear as to what is expected of them because the expectations are ill-defined (Arnett, 2000); therefore, it is likely to be an especially stressful time of life.

During the transition to college, people experience an identity crisis (Staton, 1993). More specifically, as people experiment with roles and identities they wish to possess, they may encounter invalidation, and, in turn, psychological distress (Stryker & Serpe, 1982; Thoits, 1991). When a person's sense of identity is in question, overall life satisfaction and satisfaction with aspects of life associated with the college experience may decrease (Lounsbury et al., 2004; Lounsbury et al., 2005). Furthermore, experimenting with an identity may cause discomfort (Erikson, 1968), and coping with changes in identity can be confusing and difficult (Arnett, 2000). Arnett suggested that emerging adults may experience depression while coping with changes in their identity, which is consistent with evidence that the likelihood of experiencing depression increases during late adolescence and early adulthood (Radloff, 1991). The increase in depression and decrease in life satisfaction during this time may be related to identity uncertainty.

Uncertainty reduction theory (Berger, 1979) suggests that uncertainty within interpersonal relationships can be behavioral or cognitive. Behavioral uncertainty refers

to not knowing what to do or say in an interaction, and cognitive uncertainty refers to not knowing content. Within close relationships, behavioral uncertainty is associated with norms (Knobloch & Solomon 1999). As people experience new identities, they must learn to manage the norms associated with those new identities. Because identities are enacted in relationships (Hecht, 1993), people may experience uncertainty about how to enact a new or changing identity. Cognitive uncertainty within close relationships concerns questions about the value of the relationship (Knobloch & Solomon, 1999). People are motivated by the potential costs and rewards of interactions with their partners, and they use the potential benefits of the interaction to determine the future of the relationship (Sunnafrank, 1986). If they are unable to make these determinations, they may experience cognitive uncertainty. In a similar vein, individuals may question the costs and rewards of adapting and enacting a particular identity, which may lead to cognitive uncertainty about an identity. To the extent that behavioral and cognitive uncertainty are uncomfortable states or compromise communication experiences, this body of work suggests that identity uncertainty will undermine subjective well-being.

Although research on identity uncertainty, per se, is limited, Arnett (2000) argued that individuals often experience confusion during identity development. To the extent that changes in identity create feelings of unease and confusion about the self, the subjective well-being of people experiencing identity uncertainty may decline.

Accordingly, I predict the following hypothesis:

H1: During emerging adulthood, identity uncertainty is negatively related to subjective well-being.

Research suggests that contingencies of self-worth also influence college student's experiences. In particular, Crocker (2002) found that several contingencies of self-worth reported by college students, especially appearance, are associated with stress, aggression, drug and alcohol use, and symptoms of eating disorders. Another study reported that approval from others, appearance, competition, and academics predicted increases in depressive symptoms over the first semester of college (Sargent, Crocker, & Luhtanen, 2006). This research indicates that when facets of the self are threatened, people may experience negative consequences. Furthermore, self-schema theory suggests that people react to information that corresponds with their expectations and views of themselves (Markus, 1977). Thus, people may react differently to facets of identity depending on how closely those facets are related to their self-schema. In particular, the following hypothesis specifies how the importance of specific facets of identity may moderate the effect of identity uncertainty on subjective well-being:

H2: During emerging adulthood, uncertainty about identities considered important to the individual has a more negative impact on subjective well-being than uncertainty about identities considered less important.

#### *Communication with Friends and Identity Uncertainty*

The relationship between identity uncertainty and communication is a developmental process that occurs over time. Uncertainty may motivate people to communicate, and through communication uncertainty may be reduced. For example, a person who frequently communicates with a relational partner may experience less identity uncertainty because frequent communication provides more chances for the person's identity to be confirmed. Alternatively, a person who experiences identity



uncertainty may increase communication with a relational partner in an effort to reduce the uncertainty. This relationship is depicted in Figure 3.1.

Communication with friends may help people cope with the uncertainty they experience. URT argues that people are motivated to reduce uncertainty. By extension, I expect that people experiencing uncertainty about an identity tend to be motivated to reduce that uncertainty. One way in which people may reduce identity uncertainty is through conversations with close relationship partners. The communication theory of identity focuses on the mutual influences between identity and communication (Jung & Hecht, 2004), suggesting that through communication, identities can develop or emerge. Talking about issues related to a particular identity may improve a person's understanding of that identity and alleviate the uncertainty associated with that identity. To the extent that identity uncertainty motivates communication with friends about facets of identity, the following hypothesis should be supported:

H3: During emerging adulthood, identity uncertainty is positively correlated with the frequency of communication with a friend about an identity.

Of course, people vary in their discomfort with tolerance for uncertainty.

Uncertainty can be perceived as short-lived or ongoing (Lazarus & Folkman, 1984), and therefore easier or more difficult to tolerate. The way in which people appraise a situation can also affect how they tolerate uncertainty. For example, people are motivated to reduce uncertainty based on their appraisal of the uncertainty as positive, negative, or neutral (Kramer, 1999). Finally, some people prefer uncertainty to certainty (Brashers, 2001). Given individual differences in experiences of uncertainty, the following

hypothesis specifies how tolerance for uncertainty may impact the association between identity uncertainty and communication about identities.

H4: During emerging adulthood, identity uncertainty has a less positive association with frequency of communication when tolerance for uncertainty is high rather than low.

Specific qualities of communication about facets of identity may affect the outcome of those interactions. Positive communication experiences and communication satisfaction are related, and generally lead to “fulfilled expectations” (Myers, 1998, p. 309). High levels of communication satisfaction are related to positive relationships, which in turn, can influence an individual’s subjective well-being (Williams & Nussbaum, 2001). Consequently, I expect that positive communication about a facet of identity may help decrease uncertainty about that facet, whereas negative communication experiences may increase identity uncertainty. Conversations may also create feelings of confirmation about an identity. High person-centered communication, which recognizes a person’s feelings and ideas as legitimate, and low person-centered messages, which deny, ignore, and challenge a person’s feelings and ideas (Burlison, 1994) may be related to reducing or increasing identity uncertainty. Based on these assumptions, the following hypotheses are advanced:

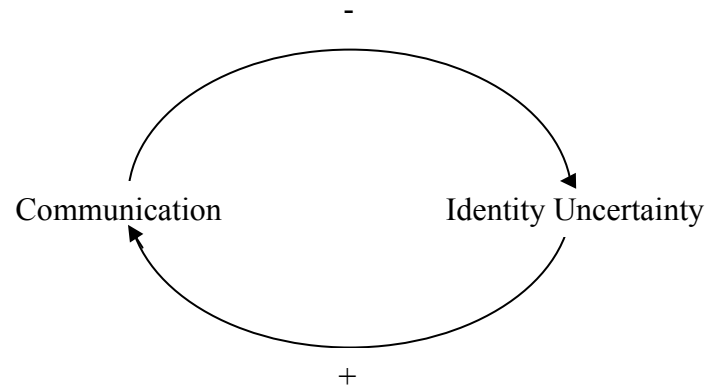
H5: During emerging adulthood, the positivity of conversations with friends about a particular identity is negatively associated with subsequent uncertainty about that identity.

H6: During emerging adulthood, the negativity of conversations with friends about a particular identity is positively associated with subsequent uncertainty about that identity.

H7: During emerging adulthood, the degree of confirmation from friends about a particular identity is negatively associated with subsequent uncertainty about that identity.

### Chapter Summary

This chapter highlighted the predicted associations between identity uncertainty and subjective well-being, identity uncertainty and frequency of communication, and identity uncertainty and characteristics of communication. Furthermore, I suggested that the impact of identity uncertainty on subjective well-being is moderated by contingencies of self-worth, and the impact of identity uncertainty on communication is moderated by tolerance for uncertainty. As a set, the hypotheses advanced in this chapter illustrate the relationships among communication, identity uncertainty, and subjective well-being. In the next chapter, I describe a pilot study used in this dissertation to verify identity uncertainty as a measurable construct.



*Figure 3.1.* Developmental Relationship between Communication and Identity Uncertainty.

## CHAPTER 4

A pilot study was conducted in the fall semester of 2007. The primary goal of this study was to create and evaluate a measure of *identity uncertainty*. The study also provided an opportunity to conduct an initial test of the link between identity uncertainty and communication. To assess the measure of identity uncertainty, I evaluated its measurement properties and examined its associations with other variables, including communication with friends. As a foundation for the tests I conducted, I first discuss how a variety of factors may be associated with identity uncertainty.

### Factors Associated with Identity Uncertainty

To test the measure of identity uncertainty, I explored several constructs that may be related to identity uncertainty. The purpose of investigating these associations was to confirm that identity uncertainty is a distinct construct, but that it is associated with constructs that elicit related feelings or emotions. In particular, I consider how identity uncertainty may be associated with subjective well-being, contingencies of self-worth, demographic characteristics, and communication with friends.

#### *Identity Uncertainty and Subjective Well-being*

Subjective well-being is defined as a person's evaluation of his or her life. This evaluation includes multiple aspects of an individual's life, such as positive and negative affect, and satisfaction with personal relationships, work or school, and life in general. Subjective well-being results when people have a feeling of mastery and progress toward their goals, engaging in enjoyable activities, and maintaining positive social relationships (Diener, Sapyta, & Suh, 1998). For this study, subjective well-being is conceptualized in terms of satisfaction with facets of life.

In the previous chapter, I predicted that subjective well-being and identity uncertainty are negatively correlated. This claim is important to verify in the pilot study for two reasons. First, evaluating this association reflects on the adequacy of the identity uncertainty measure. Second, the negative association between identity uncertainty and subjective well-being is among the assumptions motivating the study of identity uncertainty. If identity uncertainty and subjective well-being are not associated, then experiencing identity uncertainty may not be problematic. Hence, the pilot study addressed the following hypothesis:

P-H1: Identity uncertainty has a small to moderate negative correlation with subjective well-being.

#### *Identity Uncertainty and Contingencies of Self-worth*

Contingencies of self-worth “represent the domains in which self-esteem is threatened by setbacks and failures” (Crocker et al., 2003, p. 894). Crocker et al. (2002) argued that when people fail at their goals linked to self-worth, they may suffer an extreme fluctuation in their self-esteem. Because people desire to protect, maintain, and enhance their self-esteem, contingencies of self-worth serve a self-regulatory role; people seek out situations that allow them to achieve success and avoid failure in domains on which their self-worth is valued. As noted in a previous chapter, Crocker et al. (2003) identified seven domains of contingency that are important sources of self-esteem: *others’ approval, appearance, competition, academic competence, family support, virtue, and God’s love*. Based on the experiences of emerging adults, I included five additional facets as relevant during this stage of life: *friend support, communication competence, physical shape, ethnicity, and sexuality*.

When people have a sense of who they are, they are able to respond to information that matches their expectations and views of themselves (Markus, 1977). When people have schemas about who they are, they are less likely to have identity uncertainty. For example, if a woman views herself as a good student, she is able to identify the areas in which she is strongest or the methods she uses to study; her detailed self-knowledge on this topic may protect her from self-doubts and identity uncertainty. In contrast, people are less likely to have a schema for a facet of identity that is not important to them (Markus, 1977). When a self-schema does not exist, people retain less complete and specific self-knowledge. Although the facet of identity is not important, people may experience uncertainty about it simply because they do not have a corresponding schema. This association between contingencies of self-worth and susceptibility to identity uncertainty is reflected in the following hypothesis:

P-H2: Uncertainty about a particular facet of identity is negatively correlated with the extent to which a person's self-worth is contingent on that facet of identity.

#### *Identity Uncertainty and Demographic Variables*

An important question to address in developing a measure of identity uncertainty is its association with various demographic characteristics. Sex differences have been found in autonomy and intimacy development in college students (Greeley & Tinsley, 1988), which suggests that males and females may have different developmental trajectories during emerging adulthood. Although life experiences, rather than age, are assumed to propel people toward adulthood, age may also be linked to identity uncertainty. Third, the presence of a romantic partner may offer a source of identity verification, or it may present the need to grapple with new identity issues. Finally,

ethnicity has been linked to identity gaps (Jung & Hecht, 2004) in ways that may surface in a measure of identity uncertainty. To determine how identity uncertainty is related to these demographic variables, the following research question is posed:

P-RQ1: Is identity uncertainty related to a person's sex, age, romantic relationship status, or ethnicity?

### *Communication with Friends*

In addition to these hypotheses and research question, the pilot study explored the role that communication with friends plays in identity uncertainty. Communication provides a mechanism for expressing and practicing identity. Research on the communication theory of identity and personal narratives suggest that people's communication about their identity can affect identity development. Furthermore, when people experience communication that recognizes their feelings and ideas as legitimate, they may feel less uncertain about a facet of their identity. On the other hand, when people have conversations that deny, ignore, or challenge their feelings and ideas, the uncertainty about a facet of their identity may remain. One goal of the pilot study is to obtain a sense of how communication with friends affects identity uncertainty, such that communication is a vehicle for reducing uncertainty. Thus, the following hypothesis is addressed.

P-H3: Participating in communication that is relevant to a facet of identity is associated with decreased uncertainty about that facet of identity.

Because the influence of communication about a facet of identity on identity uncertainty may depend upon pre-existing levels of identity uncertainty, I also pose this research question:



P-RQ2: Is the hypothesized association between communication and identity uncertainty contingent on the amount of pre-existing uncertainty about that facet of identity?

The following sections describe the method and results of the pilot study.

### Method

The pilot study was a longitudinal study conducted over a 10 week period in the Fall 2007 academic semester. The study began during the fourth week of the semester and concluded during the second to last week of the semester. The study included two online surveys and a series of four online diary-like surveys.

#### *Participants*

Participants were 131 (61 males, 70 females) first year students recruited from a required general education public speaking course at a large northeastern university (mean age = 18.35,  $SD = 1.07$ ). Respondents in the initial and final online surveys received course credit for participation. Participants who completed the online diaries earned \$5.00 for each of the four diaries they completed. The sample was predominantly White or Caucasian (83.1%); the remaining respondents identified as Black or African American (3.5%), Hispanic or Latino (3.5%), Asian (4.2%), Native Hawaiian or other Pacific Islander (1.4%), and other (0.7%). Fifty-one (17 males, 34 females) respondents who completed the initial online study also completed between one and four online diaries throughout the semester. Of the original 131 participants, 100 (46 males, 54 females) completed the final online survey; these participants comprised the sample used to assess the newly developed measure of identity uncertainty described subsequently.

### *Procedures*

The initial survey was administered during the fourth week of the semester. The final questionnaire was administered ten weeks later. Between the initial and final questionnaires, diary-like surveys were implemented. The following paragraphs describe the procedures used in each data collection period.

The goal of the first survey was to establish participants' level of identity uncertainty early in the transition to college. Participants were notified by email that the survey was available, and they had approximately 10 days after notification to complete the online survey. The first page of the survey gathered informed consent, after which participants answered questions relevant to this study, as well as another project. The initial survey took approximately 30 minutes to complete.

Upon completion of the initial survey, participants were contacted via email and informed of the option to participate the diary portion of the study. Four diary-like surveys were administered every other week following the completion of the initial survey. Respondents were notified by email when each of the four diary surveys was accessible, and participants were given one week to complete each diary. The diary asked participants to indicate if they had had a meaningful conversation about a facet of their identity in the past two weeks. If they reported having a meaningful conversation, they were asked to describe that conversation.

Ten weeks after the initial survey was completed, the final questionnaire was administered. Participants were notified by email that the final questionnaire was available. The final questionnaire was identical to the initial survey, except that demographic questions were not repeated. The goal of the final questionnaire was to

capture any changes in identity uncertainty over the course of a student's first semester of college.

### *Measures*

*Subjective well-being.* Subjective well-being was measured using the Multidimensional Students' Life Satisfaction Scale (MSLSS; Huebner, 2001), which was designed to provide a multidimensional profile of children's and adolescents' life satisfaction judgments. More specifically, the MSLSS provides a profile of children's and adolescents' satisfaction with important, specific domains (e.g., school, family, friends) in their lives, and assesses their general overall life satisfaction. The MSLSS measures satisfaction with *family, friends, school, living environment, and self*. Participants responded using a 5-point scale (1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree). Sample questions include: (a) My family gets along well together; (b) My friends will help me if I need it; (c) I like being a student; (d) I wish I lived in a different place; and (e) There are lots of things I can do well. Reliabilities in previous research range from .70s to low .90s (Greenspoon & Saklofske, 1997; Huebner, 1994), and the scale has been found to be valid (Huebner, 1994). Descriptive statistics from this study are in Table 4.1. I also created a composite measure of subjective well-being that was the average of all items (initial survey:  $M = 4.12$ ,  $SD = 0.46$ ,  $\alpha = .80$ ; final survey:  $M = 4.16$ ,  $SD = 0.48$ ,  $\alpha = .84$ ).

*Contingencies of self-worth.* Crocker et al. (2003) developed a scale to measure contingencies of self-worth, which represent domains in which goals and self-worth are related. Crocker et al. suggested that people desire success and want to avoid failure in domains on which self-worth is contingent; thus, when goals are threatened, self-worth is

threatened. The contingencies of self-worth scale asks respondents to consider how important different qualities are to how they view themselves, and measures seven facets of the self: *others' approval, appearance, competition, academic competence, family support, virtue, and God's love*. Reliabilities for the subscales in previous research are high, with alphas ranging from .82 to .96 (Crocker et al., 2003). In addition to the contingencies of self-worth proposed by Crocker et al. (2003), I assessed five facets of self-worth relevant to the transition to college: *friend love and support, communication competence, being in good physical shape, ethnicity, and sexuality*.

Participants responded to statements using a 5-point scale (1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree). Sample questions include: (a) I don't care what other people think of me; (b) It is important to my self-respect that I have a family that cares about me; (c) Knowing that I am better than others on a task raises my self-esteem; and (d) I feel worthwhile when I am able to communicate well with others (see Table 4.1 for descriptive statistics). I also created a global measure of contingencies of self-worth that was the average of all items (initial survey:  $M = 3.53$ ,  $SD = 0.33$ ,  $\alpha = .70$ ; final survey:  $M = 3.62$ ,  $SD = 0.39$ ,  $\alpha = .79$ ).

*Identity uncertainty.* I created a measure of identity uncertainty by modifying the contingencies of self-worth scale to ask participants how certain they are about their self-perceptions with respect to each facet of identity. The instructions further specified, "You are not asked to rate how much each quality applies to you or how you rate on that quality; but rather how certain you are about your perception of yourself." Participants responded using a 6-point scale (1 = completely or mostly uncertain, 2 = mostly uncertain, 3 = more uncertain than certain, 4 = more certain than uncertain, 5 = mostly

certain, and 6 = completely or mostly certain), and items were recoded so that higher values indicated more uncertainty. All items in the scale are reported in Table 4.2.

*Communication about facets of identity.* In each online diary survey, participants were asked to indicate how frequently within the past two weeks they experienced a meaningful conversation about their identity using a 5-point scale (1 = never, 2 = rarely, 3 = occasionally, 4 = often, 5 = very frequently). Then, participants were asked if the conversation they had changed how they viewed themselves as a person in terms of the specific facets of identity. For example, I asked, “Did any of the conversations you had in the past two week cause you to question, think about, or alter the way you feel or think about yourself as a competitive person?” Participants were then asked to describe the conversation.

To create a measure of frequency of meaningful communication about each facet of identity, I needed to take into account the fact that not all participants completed each of the four diaries, and that not all participants who did so reported any meaningful conversations. Thus, I created a score reflecting the prevalence of communication about each facet of identity. The prevalence of communication score was corrected for the number of diaries completed by each participant. To calculate the score, the number of diary entries about a specific facet was divided by the number of diaries completed. This accounted for participants who completed each of the four diaries but reported very few or no meaningful conversations, and for participants who completed fewer than four diaries, but reported several meaningful conversations. Of the 61 participants who completed diaries, 51 participants reported at least one meaningful conversation about a

facet of identity; descriptive stats for the density of communication about different facets of identity are in Table 4.3.

### Analysis

One goal of the pilot study was to create a measure of identity uncertainty based on Crocker et al.'s (2003) contingencies of self-worth scale. To assess the measurement of each of the facets of identity within the scale, I conducted confirmatory factor analysis (CFA), which promotes the identification of variables that are internally consistent, parallel, and unidimensional.

To conduct the CFA, I first assessed the fit of the measurement model for all of the variables within the initial survey and the final survey. Then, I deleted items that loaded onto more than one latent construct. I examined three goodness-of-fit indices to evaluate the CFA models: (a) the  $\chi^2/df$  ratio, (b) the *CFI*, and (c) the *RMSEA*. I concluded that the models fit the data if  $\chi^2/df$  was less than 3.00, *CFI* was more than .90, and *RMSEA* was less than .10 (per Browne & Cudeck, 1993; Kline, 1998).

P-H1 specified that identity uncertainty had a small to moderate negative correlation with subjective well-being; therefore, I tested this prediction by computing correlations between the facets of identity uncertainty and the different domains of subjective well-being. P-H2 predicted that uncertainty about a particular facet of identity was negatively correlated with the extent to which a person's self-worth is contingent on that facet of identity. To test this prediction, I computed correlations between the facets of identity uncertainty and the contingencies of self-worth subscales. For each analysis, I considered significant correlations for both one-tailed and two-tailed tests. To test the research question concerning demographic differences in identity uncertainty, I

conducted t-tests or analysis of variance for each of the demographic variables. For the facets that yielded significant results, I ran a multivariate analysis with a test of interactions to consider demographic differences in combination with time between the initial and final surveys.

To test the effect of communication with friends on identity uncertainty at the end of the semester (P-H3), I conducted a hierarchical regression analysis to explore the role of communication in identity uncertainty. I limited the analyses to the facets of identity that were the topic of meaningful conversations reported by at least 20 percent of the sample. In other words, if fewer than 12 people reported a facet as a meaningful topic of conversation, that facet was excluded from the analysis. Reports of conversations about ethnicity, communication competence, and sexuality fell below this threshold and were not included. The facets of identity that were analyzed were competitiveness, attractiveness, intelligence, family support, friend support, physical shape, and spirituality. For each of the individual facets of identity, I regressed the identity uncertainty score for each facet from the final survey onto its corresponding identity uncertainty score from the initial survey. Then, I added the variable representing the prevalence of communication about the facet of identity to the regression model. Next, to test whether the impact of having a conversation on identity uncertainty at the end of the semester depended on identity uncertainty at the beginning of the semester (P-RQ2), I entered a two-way interaction between identity uncertainty for the facet at time one and the density of diary entries about that facet.

## Results

In this section, I report the results of each of the analyses that I performed.

### *Confirmatory Factor Analysis*

Separate CFAs were conducted for the initial and final surveys. The sample sizes for the initial and final survey analyses were 131 and 100, respectively. The first run for both surveys yielded unacceptable results, and I removed items based on evidence of cross-loading and modification indices. In total, nine items were dropped from the measurement model (see Table 4.2 for items dropped and retained). The fit indices for the measure of identity uncertainty comprised of the remaining items were  $\chi^2/df = 1.99$ , CFI = .90, and RMSEA = .08 in the initial survey. The fit indices for the revised identity uncertainty measure were  $\chi^2/df = 1.65$ , CFI = .93, and RMSEA = .07 in the final survey. These results suggest that the measure of uncertainty identity exhibited sound psychometric properties.

Scores were averaged to calculate composite measures reflecting the amount of uncertainty about each facet of identity (see Table 4.4 for descriptive statistics). People may be generally more or less uncertain, so I computed correlations between the individual facets of identity for each survey to test whether it was viable to create a composite measure of identity uncertainty (see Table 4.5 for results from the initial survey). The results revealed significant correlations, therefore, I computed a composite measure of identity uncertainty that was the average of the responses to all items (initial survey:  $M = 2.48$ ,  $SD = 1.00$ ,  $\alpha = .96$ ; final survey:  $M = 2.51$ ,  $SD = 1.04$ ,  $\alpha = .97$ ).

### *Identity Uncertainty and Subjective well-being*

For both the initial and final surveys, the composite measure of identity uncertainty was negatively correlated with the composite measure of subjective well-being,  $r = -.19$ ,  $p < .05$ ;  $r = -.29$ ,  $p < .01$ . In the initial survey ( $N = 131$ ), approximately



40% of the individual facets of identity uncertainty were negatively correlated with the different areas of subjective well-being (see Table 4.6). Uncertainty about the others' approval, family support, and friend support were negatively correlated with more of the different aspects of subjective well-being than the other facets of identity uncertainty. Uncertainty about others' approval and uncertainty about friend support were negatively correlated with family satisfaction, friend satisfaction, and satisfaction with the self. Uncertainty about family support was negatively associated with each aspect of subjective well-being. Uncertainty about sexuality, ethnicity, and physical shape were not significantly correlated with subjective well-being. Satisfaction with school was only correlated with uncertainty about academic comprehension and uncertainty about family support.

In the final survey ( $N = 100$ ), approximately 65% of the individual facets of identity uncertainty were negatively associated with the different aspects of subjective well-being (see Table 4.7). As with the initial survey, satisfaction with school was only correlated with two facets of identity uncertainty: morality and communication competence. Family satisfaction was negatively correlated with all of the facets of identity uncertainty except appearance, competitiveness, and ethnicity. Friend satisfaction was negatively correlated with all of the facets of identity uncertainty except ethnicity. Satisfaction with the self was negatively associated with all of the facets of identity uncertainty except family support, spirituality, and ethnicity. Ethnicity was not significantly correlated with any of the aspects of subjective well-being.

The results for both the initial and final survey are consistent with H1. They suggest that as a person experiences more identity uncertainty, he or she typically

experiences lower levels of subjective well-being. The magnitude of the observed correlations suggests that identity uncertainty is not redundant with subjective well-being.

#### *Identity Uncertainty and Contingencies of Self-worth*

As predicted, the composite identity uncertainty measure was negatively correlated with a global composite of the contingencies of self-worth for both the initial and final surveys,  $r = -.18, p < .05$ ;  $r = -.33, p < .01$ . In the initial survey, approximately 29% of the individual facets of identity uncertainty were negatively correlated with the individual facets of self-worth (see Table 4.8). The correlations pertinent to the hypothesis are between the facets of identity uncertainty and their corresponding contingency of self-worth, which are located on the diagonal in Table 4.8. Of the 12 relevant correlations between facets of identity uncertainty and facets of contingencies of self-worth, six were statistically significant: competitiveness, academic competence, family support, morality, friend support, and physical shape.

The final survey revealed approximately 72% of the individual facets of identity uncertainty were negatively associated with the individual facets of self-worth (see Table 4.9). Eight facets of identity uncertainty were negatively correlated with their corresponding contingencies of self-worth: others' approval, competitiveness, academic competence, family support, morality, friend support, communication competence, and physical shape.

The results for both the initial and final surveys provide partial support for H2. In general, as a person experiences more identity uncertainty, his or her self-worth is less contingent on a particular facet of identity. Data from the initial survey showed significant negative associations between uncertainty about a specific facet of identity

and the extent to which self-worth was contingent on that facet in 6 of the 12 tests. In the final survey, 8 of the 12 tests conformed to the hypothesis.

#### *Associations between Identity Uncertainty and Demographic Variables*

The purpose of the research question was to see if identity uncertainty is related to various sociological variables. Demographic variables in the study included sex, age, relationship status, and ethnicity. No differences were found for age, relationship status, and ethnicity. There were, however, several sex differences in identity uncertainty (see Table 4.10).

A general linear model approach was taken to analyze the sex differences. I ran a multivariate analysis with identity uncertainty for each facet from the initial and final surveys as the dependent variables and respondent sex as a fixed factor. An overall sex difference was found for others' approval, academic competence, family support, morality, spirituality, friend support, communication competence, physical shape, and ethnicity. Men reported more uncertainty than women for each facet of identity for both the initial and final surveys.

In addition, an interaction was found for family support,  $F = 5.77, p < .05$ , physical shape,  $F = 4.77, p < .05$ , and ethnicity,  $F = 6.09, p < .05$ . For family support, males reported more uncertainty at time two ( $M = 2.46, SD = 1.61$ ) than at time one ( $M = 1.98, SD = 1.46$ ), and females reported less uncertainty at time two ( $M = 1.50, SD = 0.91$ ) than at time one ( $M = 1.73, SD = 1.11$ ). For physical shape, males reported more uncertainty at time two ( $M = 2.96, SD = 1.45$ ) than at time one ( $M = 2.55, SD = 1.34$ ), and females reported less uncertainty at time two ( $M = 2.21, SD = 0.84$ ) than at time one ( $M = 2.42, SD = 1.08$ ). For ethnicity, males reported more uncertainty at time two ( $M =$

3.05,  $SD = 1.38$ ) than at time one ( $M = 2.77$ ,  $SD = 1.30$ ), and females reported less uncertainty at time two ( $M = 2.27$ ,  $SD = 1.08$ ) than at time one ( $M = 2.69$ ,  $SD = 1.24$ ).

#### *Communication and Identity Uncertainty*

To test the association between communication and identity uncertainty, I ran a hierarchical regression analysis. To do so, I regressed the identity uncertainty score for each facet from the final survey onto its corresponding identity uncertainty score from the initial survey. Then, I added prevalence of communication about the facet of identity to the regression model. Finally, I assessed a variable representing the interaction between identity uncertainty for the facet at time one and the density of diary entries about that facet to test whether the impact of having a conversation on identity uncertainty at the end of the semester depended on identity uncertainty at the beginning of the semester. The hierarchical regression analyses indicate non-significant results for four facets of identity: attractiveness, intelligence, friend support, and physical shape. In other words, communication about these facets of identity did not predict uncertainty about them at the end of the semester. Additionally, I did not find a significant interaction between communication and identity uncertainty at the start of the study for any of these facets of identity.

Results indicated a significant main effect of density of diaries about family on identity uncertainty about family support at time two,  $R^2\Delta = .06$ ,  $p < .05$ . As expected, uncertainty about family support at time one predicts family support identity uncertainty at time two, and the prevalence of diaries about communication about uncertainty about family negatively predicts uncertainty about family support at time two. The analyses also revealed a main effect of communication about spirituality of identity uncertainty

about spirituality at time two, beyond the effects of identity uncertainty about spirituality at time one, that approached statistical significance,  $R^2\Delta = .05, p = .06$ . In particular, uncertainty about spirituality at time one predicts uncertainty about spirituality at time two, and people who had more frequent conversations about spirituality tended to report less uncertainty about the spiritual facet of their identity at the end of the semester.

The analyses also revealed a significant interaction between uncertainty about competitiveness at time one and the prevalence of diary entries about competitiveness,  $R^2\Delta = .10, p < .01$ , which suggested that the effect of talking about competitiveness on uncertainty about competitiveness at time two depended on uncertainty about competitiveness at time one. To probe this interaction, I followed guidelines recommended by Aiken and West (1991). According to Aiken and West (1991), in a model that includes a main effect and interaction terms, the simple slope for an independent variable is an estimate of the association when all other variables in the model have a value of zero. Aiken and West (1991) also indicated that when the distribution of the independent variables is adjusted so that the zero points are meaningful, the simple slopes for the prevalence of diary entries at time one can be calculated at one standard deviation below the mean of competitiveness uncertainty, at the mean of competitiveness uncertainty, and at one standard deviation above the mean of competitiveness uncertainty.

To apply this procedure to this analysis, I centered competitiveness uncertainty at time one around its mean (i.e., mean = 0), created two additional terms centered at one standard deviation below and above the mean, and conducted additional regression analyses substituting each of the new terms into the original model.

Results indicated that talking about competitiveness reduced uncertainty for people who reported average ( $slope = -1.21, p < .05$ ) and high ( $slope = -2.85, p < .01$ ) levels of uncertainty about competitiveness in the initial survey. In contrast, people who reported low levels of uncertainty about competitiveness did not decrease their uncertainty by having conversations about competitiveness ( $slope = 0.44, ns$ ).

Each of the hypotheses was at least partially supported. As predicted, identity uncertainty and subjective well-being were negatively correlated; as an individual's identity uncertainty increased, his or her subjective well-being decreased. The second hypothesis was also supported, such that people who reported more uncertainty about a facet of identity tended to report that their self-worth was less contingent on that corresponding facet of identity. The only demographic differences for identity uncertainty were sex differences; and I did not observe significant differences associated with age, relationship status, or ethnicity. The third hypothesis was partially supported, suggesting that communication does play a role in identity uncertainty. In this analysis, having conversations related to family support and competitiveness significantly influenced uncertainty about that facet of identity. Taken together, these results suggest that identity uncertainty is a unique measure that correlates in an expected manner with related constructs. Although limited, the results also suggest that identity uncertainty is sensitive to a very general measure of communication.

### Discussion

The goal of the pilot study was to determine the reliability and validity of the identity uncertainty measure, and to explore the effect of communication about identity on identity uncertainty. Accordingly, I investigated identity uncertainty and meaningful

conversations that occurred during college students' first semester in college. In this section, I discuss the results and implications of the findings for identity uncertainty and the role that communication about facets of identity plays in identity uncertainty.

I developed a new measure to capture identity uncertainty. Based on the model fit indices, the measure provides a unidimensional assessment of uncertainty about various facets of identity. Fit indices for identity uncertainty in the initial survey were  $\chi^2/df = 1.99$ , CFI = .90, and RMSEA = .08, and the fit indices for identity uncertainty in the final survey were  $\chi^2/df = 1.65$ , CFI = .93, and RMSEA = .07. Alphas for identity uncertainty in both surveys indicate that the scale is reliable and range from .80 to .97 (initial survey) and .87 to .96 (final survey).

I predicted that identity uncertainty was negatively correlated with subjective well-being and contingencies of self-worth. Support for these hypotheses suggests that the identity uncertainty measure has construct validity and discriminant validity. The creation and validation of this scale will aid me in my goal to conduct research on identity uncertainty.

In terms of the role that communication plays in identity uncertainty, I predicted that experiencing communication that is relevant to facets of identity is associated with decreased uncertainty about the facet of identity. The hypothesis was supported for the family, spiritual, and competitive facets of identity. The transition to college is often the first time away from home and family for some students. Arnett (2000) suggested that during emerging adulthood, a person's relationship with his or her family changes, and changes in behaviors common during this transition may impact the family system (Aquilino, 2006). Research indicates that views on religion may change during the course

of a student's collegiate career (see Pascarella & Terenzini, 2005), making this facet of identity especially subject to changes as people communicate with college peers.

Competitiveness may be especially relevant to students during the transition to college because of the pressure to succeed academically (Pascarella & Terenzini, 2005). First year students might feel uncertainty about how they will compare academically to other students at the university level. Competitiveness may also arise as students attempt to succeed in creating a new social network. For example, students may feel competitive when rushing a Greek organization. Greek organizations do not offer a bid to everyone, so competitiveness might be heightened. Students who are moderately to very uncertain about competitiveness may experience a reduction in uncertainty if they have conversations about their uncertainty.

The results of the pilot study suggest that identity uncertainty is a legitimate phenomenon that can be tested with reliability and validity. Moreover, these results provide some evidence that communication may affect uncertainty about specific facets of self-worth. Thus, this pilot study lays the groundwork for future research on the measure of identity uncertainty, as well as the relationship between communication with friends and identity uncertainty.



Table 4.1

*Descriptive Statistics for Variables in the Pilot Study*

	<u>Initial Survey</u>			<u>Final Survey</u>		
	$\alpha$	$\bar{x}$	SD	$\alpha$	$\bar{x}$	SD
<u>Subjective Well-being</u>						
Family	0.84	4.20	0.66	0.85	4.27	0.64
Friend	0.88	4.19	0.59	0.86	4.15	0.55
School	0.81	4.03	0.61	0.70	4.08	0.58
Self	0.81	4.02	0.48	0.93	4.00	0.74
<u>Contingencies of Self-worth</u>						
Others' approval	0.71	3.21	0.79	0.80	3.18	0.90
Appearance	0.73	3.52	0.73	0.73	3.55	0.83
Competitiveness	0.78	3.74	0.61	0.91	3.81	0.82
Academic Competence	0.78	4.22	0.59	0.87	4.15	0.80
Family support	0.70	3.99	0.60	0.80	3.89	0.80
Morality	0.83	3.68	0.74	0.90	3.81	0.86
Spirituality	0.91	3.07	0.99	0.94	3.15	1.07
Friend support	0.74	3.91	0.61	0.77	4.05	0.59
Communication competence	0.75	3.79	0.55	0.80	3.79	0.61
Physical shape	0.74	3.95	0.58	0.72	4.00	0.60
Ethnicity	0.77	2.29	0.73	0.84	2.37	0.85
Sexuality	0.71	3.02	0.62	0.64	3.17	0.60

*Note.*  $N = 131$  scores for initial survey;  $N = 100$  scores for final survey.

Table 4.2

*Items in Identity Uncertainty Scale*

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Each item began with the stem “How certain are you about...”

## Others' approval

Whether other people like you

What other people think of you\*

The opinions that other people have about you

Whether other people respect you

## Appearance

Whether you are good looking

Whether you are attractive

Whether you are pretty or handsome

Whether you like how you look

## Competitiveness

Whether you are better than others people at things you do

How your performance on tasks compares to others\*

Whether you do well when you are competing with others

Whether you can out-perform other people on a task

## Academic competence

How well you are doing academically

Whether you are doing well in school

Whether you are a good student\*

Whether your performance in school is lacking

Each item began with the stem “How certain are you about...”

#### Family support

Whether your family cares about you

How your family feels about you\*

Whether your family loves you

The kind of relationship you have with your family

#### Morality

Whether you follow your moral/ethical principles

Whether you would do something unethical\*

Whether you live up to your own moral code

Whether you follow your principles

#### Spirituality

Whether you feel a sense of spirituality

How important spirituality is to you

Whether being spiritual matters to you

Whether you are a spiritual person

#### Friend support

Whether your friends like you

Whether you are important to your friends

Whether you have good friendships\*

How much your friends like you\*

Each item began with the stem “How certain are you about...”

Communication competence

Whether you communicate effectively

Whether you have trouble communicating with people\*

Whether you are a competent communicator

How well you can communicate with others

Sexuality

Your sexuality

How important your sexuality is to you

How well you express your values about your sexuality\*

Whether you understand your sexuality

Ethnicity

Your ethnicity

How you feel about your ethnic background

Whether your ethnicity is important to you

How important your ethnicity is to you

Physical shape

Whether you are in good physical shape

How physically fit you are

Whether or not you are physically fit

Whether your physical condition is good or bad

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*Note.* Items with an asterisk were removed from the final measure.

Table 4.3

*Descriptive Statistics for Density of Communication about Different Facets of Identity*

<u>Facet of Identity</u>	<u>Number of Diaries Reported in</u>	<u>Density of Communication</u>	
		$\bar{x}$	(SD)
Appearance	26	0.17	(0.28)
Competitiveness	33	0.23	(0.30)
Academic competence	37	0.24	(0.31)
Family support	22	0.14	(0.26)
Spirituality	18	0.11	(0.25)
Friend Support	28	0.17	(0.30)
Communication competence	12	0.08	(0.19)
Physical shape	34	0.20	(0.29)
Ethnicity	9	0.06	(0.16)
Sexuality	12	0.08	(0.22)

*Note.* Density of communication was computed as the number of conversations about a facet divided by the number of diary entries.

Table 4.4

*Descriptive Statistics for Identity Uncertainty, Pilot Study*


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	<u>Initial Survey</u>			<u>Final Survey</u>		
	$\alpha$	$\bar{x}$	SD	$\alpha$	$\bar{x}$	SD
<u>Identity Uncertainty</u>						
Others' approval	0.93	2.62	3.44	0.87	2.55	3.05
Appearance	0.96	2.65	4.86	0.95	2.69	4.84
Competitiveness	0.90	2.64	3.35	0.94	2.71	3.49
Academic competence	0.80	2.49	3.67	0.92	2.36	3.61
Family support	0.96	1.84	3.96	0.95	1.94	4.12
Morality	0.92	2.38	3.74	0.93	2.53	3.86
Spirituality	0.95	2.75	5.71	0.96	2.78	5.53
Friend support	0.93	2.32	2.52	0.93	2.45	2.59
Communication competence	0.92	2.56	3.41	0.93	2.68	3.87
Physical shape	0.97	2.46	5.23	0.96	2.56	4.95
Ethnicity	0.90	2.71	5.01	0.93	2.63	5.39
Sexuality	0.92	2.29	3.83	0.94	2.26	3.71

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*Note.*  $N = 131$  scores for initial survey;  $N = 100$  scores for final survey.

Table 4.5

*Correlations between Facets of Identity Uncertainty, Initial Survey*


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	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
V1. Others' approval	-	.61**	.64**	.58**	.49**	.66**	.25	.73**	.76**	.47**	.33*	.59**
V2. Appearance		-	.59**	.66**	.49**	.50**	.15	.66**	.52**	.49**	.46**	.73**
V3. Competitiveness			-	.69**	.55**	.59**	.31*	.60**	.71**	.53**	.58**	.69**
V4. Academic competence				-	.71**	.70**	.29	.71**	.72**	.56**	.55**	.76**
V5. Family support					-	.68**	.36*	.74**	.59**	.62**	.49**	.68**
V6. Morality						-	.48**	.75**	.71**	.58**	.51**	.59**
V7. Spirituality							-	.35*	.16	.51**	.59**	.32*
V8. Friend support								-	.72**	.54**	.50**	.70**
V9. Communication competence									-	.46**	.40**	.69**
V10. Physical shape										-	.55**	.53**
V11. Ethnicity											-	.64**
V12. Sexuality												-

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\* $p < .05$ , \*\* $p < .01$ .

Table 4.6

*Correlations between Identity Uncertainty and Subjective Well-being, Initial Survey*

<u>Identity Uncertainty</u>	<u>Facet of Subjective Well-being</u>			
	Family satisfaction	Friend satisfaction	Satisfaction with school	Satisfaction with self
Others' approval	-.18*	-.25*	-.10	-.31**
Appearance	-.17 <sup>†</sup>	-.08	-.11	-.31**
Competitiveness	-.02	-.02	-.08	-.21*
Academic competence	-.18*	-.14	-.17*	-.14
Family support	-.26**	-.17 <sup>†</sup>	-.20*	-.15 <sup>†</sup>
Morality	-.18*	-.08	-.14	-.14
Spirituality	-.16 <sup>†</sup>	-.05	-.09	-.10
Friend support	-.19*	-.30**	-.14	-.24**
Communication competence	-.07	-.15 <sup>†</sup>	-.07	-.19*
Physical shape	-.04	.02	.02	-.13
Ethnicity	-.04	.03	-.05	-.02
Sexuality	-.11	-.07	-.08	-.10

<sup>†</sup> $p < .05$ , one-tailed. \* $p < .05$ , two-tailed. \*\* $p < .01$ , two-tailed.



Table 4.7

*Correlations between Identity Uncertainty and Subjective Well-being, Final Survey*

<u>Identity Uncertainty</u>	<u>Facet of Subjective Well-being</u>			
	Family satisfaction	Friend satisfaction	Satisfaction with school	Satisfaction with self
Others' approval	-.18 <sup>†</sup>	-.27**	-.10	-.23*
Appearance	-.16	-.17 <sup>†</sup>	-.01	-.27**
Competitiveness	-.16	-.20*	-.13	-.26**
Academic competence	-.22*	-.18 <sup>†</sup>	-.15	-.22*
Family support	-.28**	-.24*	-.11	-.14
Morality	-.24*	-.19 <sup>†</sup>	-.24*	-.21*
Spirituality	-.20*	-.28**	-.11	-.16
Friend support	-.26**	-.37**	-.10	-.23*
Communication competence	-.26**	-.20*	-.21*	-.30**
Physical shape	-.19 <sup>†</sup>	-.32**	-.08	-.25*
Ethnicity	-.04	-.13	-.05	-.08
Sexuality	-.19 <sup>†</sup>	-.25*	-.10	-.17 <sup>†</sup>

<sup>†</sup> $p < .05$ , one-tailed. \* $p < .05$ , two-tailed. \*\* $p < .01$ , two-tailed.

Table 4.8

*Correlations between Identity Uncertainty and Contingencies of Self-worth, Initial Survey*

Identity Uncertainty	<u>Contingencies of Self-worth</u>											
	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
V1. Others' approval	-.05	-.07	-.04	-.11	-.18*	-.05	-.02	-.14	-.07	-.12	-.08	-.19*
V2. Appearance	.00	.02	-.08	-.07	-.12	-.07	-.01	-.12	-.09	-.06	-.08	-.11
V3. Competitiveness	-.17 <sup>†</sup>	-.19*	-.29**	-.16 <sup>†</sup>	-.19*	-.12	-.12	-.14	-.14	-.14	-.13	-.24**
V4. Academic competence	-.21*	-.18*	-.11	-.19*	-.17 <sup>†</sup>	-.15 <sup>†</sup>	-.04	-.21*	-.12	-.14	-.01	-.08
V5. Family support	-.16 <sup>†</sup>	-.12	-.06	-.11	-.18*	-.08	-.10	-.13	-.07	-.11	-.03	.00
V6. Morality	-.09	-.10	-.02	-.12	-.14	-.18*	-.16 <sup>†</sup>	-.08	-.01	-.05	-.04	-.05
V7. Spirituality	.02	.01	.28**	.11	.02	.05	-.14	.00	.10	.10	.14	.05
V8. Friend support	-.22*	-.12	-.05	-.15 <sup>†</sup>	-.22*	-.07	-.12	-.22*	-.11	-.12	-.06	-.11
V9. Communication Competence	-.13	-.16 <sup>†</sup>	-.09	-.08	-.17 <sup>†</sup>	-.14	-.17 <sup>†</sup>	-.16 <sup>†</sup>	-.09	-.11	-.08	-.12
V10. Physical shape	-.16 <sup>†</sup>	-.20*	-.19*	-.22*	-.30**	-.19*	-.15 <sup>†</sup>	-.26**	-.14	-.22*	-.15 <sup>†</sup>	-.25**
V11. Ethnicity	.13	.02	.08	.06	.09	.14	.19*	.12	.18*	.08	-.01	.06
V12. Sexuality	-.05	-.15 <sup>†</sup>	-.16 <sup>†</sup>	.03	-.03	-.02	-.02	-.05	-.04	-.07	-.11	-.02

<sup>†</sup> $p < .05$ , one-tailed. \* $p < .05$ , two-tailed. \*\* $p < .01$ , two-tailed.

Table 4.9

*Correlations between Identity Uncertainty and Contingencies of Self-worth, Final Survey*

<u>Identity Uncertainty</u>	<u>Contingencies of Self-worth</u>											
	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
V1. Others' approval	-.21*	-.03	-.17 <sup>†</sup>	-.17 <sup>†</sup>	-.21*	-.19 <sup>†</sup>	-.02	-.13	-.12	-.14	-.22*	-.06
V2. Appearance	-.37**	-.13	-.27**	-.33**	-.33**	-.34**	-.17 <sup>†</sup>	-.23*	-.29**	-.25*	-.30**	-.34**
V3. Competitiveness	-.27**	-.31**	-.39**	-.31**	-.18 <sup>†</sup>	-.29**	-.25*	-.20*	-.32**	-.23*	-.18 <sup>†</sup>	-.21*
V4. Academic competence	-.39**	-.33**	-.43**	-.43**	-.33**	-.48**	-.23*	-.32**	-.43**	-.40**	-.29**	-.28**
V5. Family support	-.30**	-.14	-.30**	-.36**	-.39**	-.43**	-.36**	-.31**	-.31**	-.29**	-.35**	.30**
V6. Morality	-.16	-.15	-.24*	-.19 <sup>†</sup>	-.19 <sup>†</sup>	-.38**	-.28**	-.14	-.27**	-.19 <sup>†</sup>	-.16	-.06
V7. Spirituality	.20	.06	.18 <sup>†</sup>	.13	.06	-.03	-.16	.07	.09	.06	.02	.02
V8. Friend support	-.31**	-.17 <sup>†</sup>	-.28**	-.34**	-.34**	-.33**	-.16	-.38**	-.37**	-.26**	-.18 <sup>†</sup>	-.30**
V9. Communication Competence	-.27**	-.21*	-.19 <sup>†</sup>	-.22*	-.22*	-.37**	-.22*	-.32*	-.37**	-.14	-.09	-.26**
V10. Physical shape	-.41**	-.31**	-.39**	-.43**	-.40**	-.39**	-.27**	-.41**	-.38**	-.45**	-.30**	-.29**
V11. Ethnicity	.26**	.13	.15	.19 <sup>†</sup>	.17 <sup>†</sup>	.24*	.23*	.25*	.21*	.17 <sup>†</sup>	.06	.21*
V12. Sexuality	-.04	-.06	-.06	-.01	.06	-.02	.08	.08	-.07	-.04	-.10	-.03

<sup>†</sup> $p < .05$ , one-tailed. \* $p < .05$ , two-tailed. \*\* $p < .01$ , two-tailed.

Table 4.10

*Descriptive Statistics for Sex Differences in Identity Uncertainty*

	<u>Initial Survey</u>		<u>Final Survey</u>		<i>F</i>
	Male	Female	Male	Female	
Others' approval	2.83 (2.41)	1.25 (.98)	2.83 (2.31)	1.19 (.75)	7.82**
Academic competence	2.58 (2.31)	1.30 (1.05)	2.74 (2.04)	1.32 (.88)	6.71*
Family support	1.98 (1.73)	1.41 (1.24)	2.46 (1.50)	1.61 (.91)	8.05**
Morality	2.64 (2.18)	1.22 (1.01)	2.92 (2.20)	1.33 (.94)	10.19**
Spirituality	2.90 (2.58)	1.22 (1.41)	3.10 (2.50)	1.37 (1.13)	4.46*
Friend support	2.55 (2.11)	1.32 (1.20)	2.88 (2.07)	1.49 (.99)	8.68**
Communication competence	2.77 (2.40)	1.12 (1.06)	3.12 (2.31)	1.36 (.93)	10.09**
Physical shape	2.55 (2.42)	1.36 (1.15)	2.96 (2.21)	1.45 (.84)	5.12*
Ethnicity	2.77 (2.69)	1.16 (1.25)	3.05 (2.27)	1.38 (1.08)	4.69*

*Note.*  $N = 131$  scores for initial survey;  $N = 100$  scores for final survey. Cell entries are means, parenthetical values are SDs. The F-test is for the main effect of respondent sex across the two time intervals.

\* $p < .05$ . \*\* $p < .01$ .

## CHAPTER 5

The pilot study conducted in the fall semester of 2007 yielded significant findings that lay the foundation for the dissertation project. The pilot study addressed several hypotheses and research questions to validate identity uncertainty as a measure and to provide preliminary insight into the role of communication during the identity uncertainty process. The hypotheses that addressed the validity of the identity uncertainty measure were supported, and the hypothesis concerning the effect of communication on identity uncertainty was partially supported. The pilot study provided me with the necessary information to design the main study, which includes additional variables and expanded methods for collecting data about communication and identity uncertainty.

### Method

To evaluate the hypotheses, I conducted a longitudinal study of college students spanning the fall 2008 semester. The study included an online survey administered three times throughout the fall semester. The first survey was administered before classes commenced, the second survey was administered four weeks into the fall semester, and a final online survey was administered during the second to last week of classes in the fall semester. An online diary-like survey was conducted with a sub-sample of participants between the second and third online surveys.

### *Participants*

Participants were recruited from the admissions office at a large northeastern university. Two-hundred and fifty participants were randomly selected from a list of over 600 names. Participants were notified via email that they had been selected to take part in a research study that would be completed over the course of the semester. They were told

that the study included three online surveys, and one online diary-like survey. For each portion of the study they completed, they would be entered into a drawing to win one of 10 cash prizes of \$200. They were instructed that they would receive a follow-up email containing a link to the initial online survey, which would take approximately 30 minutes to complete. Participants were informed that they would have approximately one week to complete the initial survey, and that upon completion of the survey, they would be entered into a drawing to win a cash prize.

The response to the initial survey was slow, so an additional 50 participants were randomly selected from the original list of names. In addition, the compensation for participating in the study was enhanced to 15 cash prizes of \$300. The deadline for completing the initial survey was extended by one week to ensure participants had enough time to complete the survey. Participants received several reminder emails during the time in which the survey was available for completion. A total of 300 participants were recruited to take part in this study, and only 46 (19 males, 27 females) people completed the initial survey for a response rate of 15% (mean age = 18.07,  $SD = 0.25$ ). I used G\*Power (Erdfelder, Faul, & Buchner, 1996) to calculate the sample size necessary to detect a medium effect size. Using an alpha level of 0.05, I needed a sample of 111 to detect a medium sized correlation.

Because the original recruitment strategy did not yield a large enough sample, I used additional recruitment methods for the second and final surveys. One-hundred and twenty-eight participants were recruited from a required general education public speaking course at a large northeastern university (mean age = 20.44,  $SD = 6.37$ ; 37 first year students, 90 non-first year students). Participants recruited using this method were

informed that they would be taking part in two-part study; one portion of the study would be completed immediately, and the second portion would be completed at the end of the semester. Respondents earned course credit for participating in the study. They were also informed that they would have the opportunity to participate in the online diary-like survey, which was not required to earn course credit, but would be compensated for with entry into the drawing to win a cash prize.

Participants recruited from both the admissions list and the public speaking course were asked to take part in the online diary-like survey. Respondents were notified by email that the survey was available to be completed, and would take 30 to 45 minutes to complete. Participants taking part in this portion of the survey were compensated by being entered into the cash prize drawing. Forty-five (12 males, 27 females) respondents who completed either the initial or second survey also completed the online diary-like survey.

Overall there were 185 participants (55 males, 119 females). Of these participants, 83 were first year students, and 95 were non-first year students (academic year standing was missing for 7 participants). In total, participants for the second survey were 140 (37 males, 94 females) college students, 13 of whom participated in the initial survey. 108 (27 males, 71 females) completed the final survey (mean age = 20.05,  $SD = 3.41$ ). To summarize, the initial survey had 46 participants, the second survey had 140 participants, the dairy survey had 45 participants, and the final survey had 108 participants. Table 5.1 shows the proportion of participants for each part of the study.

The overall sample was predominantly White or Caucasian (93.2%); the remaining respondents identified as Asian (3.5%), Black or African American (2.5%), and Hispanic or Latino (0.8%).

### *Procedures*

The initial survey was administered before the fall semester began. The second survey was administered during the fourth week of the semester. The fourth week was selected because it coincides with the week of the semester during which the initial survey was conducted in the pilot study. The final questionnaire was administered during the second to last week of the semester, which also coincides with the week during which the final survey was administered in the pilot study. Between the second and final questionnaires, an online diary-like survey was conducted. The following paragraphs describe the procedures that were used in each data collection period.

The goal of the first survey was to establish participants' level of identity uncertainty at the beginning of the transition to college. Before the fall semester began, incoming students were invited by email to participate in the online study. Students who chose to participate were notified by email when the initial survey was available. They had one week to complete the initial survey. The first page of the survey gathered informed consent. Once consent had been given, the participant was asked to complete the initial survey. The initial survey took approximately 30 minutes to complete.

Prior to the fourth week of the semester, participants recruited from the general education course were notified that they had been selected to participate in the study. During the fourth week of the semester, participants from both recruitment methods were notified via email that the second survey was available to be completed. Participants had one week to complete the survey. The survey was identical to the initial survey.

Upon completion of the initial and second surveys, participants were contacted via email and informed of the option to participate in the online diary-like survey. This



survey was conducted after completion of the second survey and before the final survey. Participants were offered an additional chance in the drawing for a cash prize for their participation. The online diary-like survey consisted of both open and closed-ended questions, and asked participants to discuss conversations with friends about different facets of their identity. They were asked to describe any conversations that caused them to question a particular facet of their identity, whether they felt the conversation validated the facet of identity, and how the conversation made them feel about the identity. Participants were also asked about any uncertainty that they associated with a facet of identity and how the conversation reduced, maintained, or increased that uncertainty.

Fifty-five conversations were reported by the 45 participants who completed the diary-like survey. Of the 45 participants, 10 had a conversation about appearance, 10 had a conversation about competitiveness, 6 had a conversation about academic competence, 2 had a conversation about family support, 7 had a conversation about spirituality, 2 had a conversation about friend support, 4 had a conversation about communication competence, 5 had a conversation about ethnicity, 2 had a conversation about sexuality, and 7 had a conversation about physical shape. None reported having a conversation about others' approval.

Given the low number of conversations about each facet, I was unable to conduct analyses for hypotheses 3 and 5 through 7. Both the low response rate and the number of conversations reported compromise my ability to test hypotheses concerning communication qualities (H3, H5-H7). The proportion of people who completed the diary survey is only 24%, and not representative of the entire sample. Furthermore, the qualitative data did not provide rich or detailed explanations of the conversations.

Participants did not report specific conversations about their identity. Participants could not recall how the conversation started in 40 of the 55 conversations, and although they determined how the conversations made them feel, they were unable to determine specific moments during the conversation that triggered these feelings in 35 of the 55 conversations. These conversations appear to be subtle and pervasive, rather than specific and memorable. Therefore, the measures obtained from the diary-like survey were dropped from the study.

The final questionnaire was administered during the second to last week of the semester. Participants were notified by email that the final questionnaire was available. The final questionnaire was identical to the initial and second survey, except that demographic questions were not repeated.

### *Measures*

I used a confirmatory factor analysis to evaluate the measurement model for each of the surveys. To conduct the CFA, I evaluated the fit of the model for all of the variables within each of the surveys. Then, I removed items that loaded onto more than one latent construct. Next, I examined three goodness-of-fit indices to assess the CFA models: (a) the  $\chi^2/df$  ratio, (b) the *CFI*, and (c) the *RMSEA*. I concluded that the models fit the data if  $\chi^2/df$  was less than 3.00, CFI was greater than .90, and RMSEA was less than .10 (per Browne & Cudeck, 1993; Kline, 1998).

*Self-disclosure.* I included a measure of self-disclosure tendencies as a possible covariate in the study. In light of the loss of data on communication experiences, this measure provided an alternative operationalization of communication about self. Specifically, the willingness of participants to self-disclose information related to the self

was measured using the emotional self-disclosure scale (Miller, Berg, & Archer, 1983). Participants were asked to report the extent to which they talk with their friends about several topics. Participants responded using a 4-point scale (1 = discussed not at all, 2 = discussed some, 3 = discussed a lot, 4 = discussed fully and completely). Sample topics include: (a) Things I have done which I feel guilty about; (b) What I like and dislike about myself; (c) What makes me the person I am; and (d) Things I have done which I am proud of. Reliabilities for the scale typically range from .80s to low .90s (Miller et al., 1983).

The fit indices for the self-disclosure scale in the initial survey were  $\chi^2/df = 1.69$ , CFI = .93, and RMSEA = .08, the fit indices for the second survey were  $\chi^2/df = 1.72$ , CFI = .93, and RMSEA = .09, and the fit indices in the final survey were  $\chi^2/df = 1.78$ , CFI = .90, and RMSEA = .08. Alphas for the self-disclosure scales in each survey indicate that the scale is reliable ( $\alpha = .94$ , initial survey;  $\alpha = .92$ , second survey;  $\alpha = .95$  final survey). Table 5.2 contains descriptive statistics for this study.

*Tolerance for uncertainty.* Not all people are motivated to reduce uncertainty. To address this issue, modified items from the theory of motivated information management (TMIM; Afifi et al., 2006) were used. The anxiety subscale of TMIM addresses the extent to which uncertainty causes anxiety in people. Participants were asked to indicate the extent to which they agree that experiencing uncertainty causes them to feel nervous. Participants responded using a 7 point scale (1 = strongly disagree, 2 = disagree, 3 = moderately disagree, 4 = neutral, 5 = moderately agree, 6 = agree, 7 = strongly agree). Items include: (a) Not knowing how I feel about my identity makes me anxious; (b) Being unsure about my identity makes me nervous; (c) Feeling uncertain about my

identity does not bother me; and (d) It makes me anxious to think about how unsure I am about my identity. Four items were reverse coded so that higher values indicate more tolerance for uncertainty.

Fit indices for tolerance for uncertainty in the initial survey were  $\chi^2/df = 2.04$ , CFI = .90, and RMSEA = .08, the fit indices in the second survey were  $\chi^2/df = 1.98$ , CFI = .90, and RMSEA = .09, and the fit indices in the final survey were  $\chi^2/df = 2.10$ , CFI = .91, and RMSEA = .09. Alphas for the tolerance for uncertainty scales in each survey range from .86 to .94, indicating that the scale is reliable (see Table 5.2 for descriptive statistics).

*Subjective well-being.* Subjective well-being was measured using the Multidimensional Students' Life Satisfaction Scale (MSLSS; Huebner, 2001), which is described in Chapter 4. Participants are asked to indicate whether they agree or disagree with statements about different areas of their subjective well-being. The scale is a 5-point scale (1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree). The subscale measuring satisfaction with living environment was not included because the pilot study showed that the items in the subscale did not correlate with each other. Several items were reverse coded so that higher values indicated greater subjective well-being.

After 2 of the 31 items were dropped, the measurement model for the four factor solution fit the data. The fit indices in the initial survey were  $\chi^2/df = 2.45$ , CFI = .90, and RMSEA = .09, the fit indices for the second survey were  $\chi^2/df = 2.02$ , CFI = .92, and RMSEA = .08, and the fit indices in the final survey were  $\chi^2/df = 2.11$ , CFI = .90, and RMSEA = .08. The CFA indicated four subscales; subjective well-being about family,

friends, school, and self. Alphas for the subscales in each survey indicate that the scale is reliable ( $\alpha = .83-.89$ , initial survey;  $\alpha = .83-.92$ , second survey;  $\alpha = .76-.91$  final survey).

I also created a composite score for subjective well-being by taking the average of the four subscales ( $\alpha = .75$ , initial survey;  $\alpha = .80$ , second survey;  $\alpha = .83$ , final survey).

Descriptive statistics for this study are in Table 5.2.

*Contingencies of self-worth.* Crocker et al.'s (2003) contingencies of self-worth scale was used to measure contingencies of self-worth. In addition to the facets of self presented by Crocker et al. and per the pilot study, five additional facets were assessed. Although some of the facets of identity were not significantly associated with facets of identity uncertainty in the pilot study, evidence suggests that these facets are pertinent to college students. Therefore, I included all of the facets in the main study. Participants reported how accurately each statement described them using a 5-point scale (1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree). Several items were reverse coded so that higher values indicate that self-worth is more contingent on facets of the self.

After 5 of the 48 items were removed, the measurement model was confirmed. Fit indices for the contingencies of self-worth scale in the initial survey were  $\chi^2/df = 2.67$ , CFI = .90, and RMSEA = .09, the fit indices in the second survey were  $\chi^2/df = 2.13$ , CFI = .91, and RMSEA = .09, and the fit indices in the final survey were  $\chi^2/df = 2.22$ , CFI = .90, and RMSEA = .09. Twelve subscales were confirmed through the CFA; other's approval, attractiveness, competitiveness, intelligence, family support, morals, spirituality, friend support, communication competence, sexuality, ethnicity, and physical shape. Alphas for the contingencies of self-worth scales range from .63 to .93 (initial

survey), .68 to .89 (second survey), and .64 to .90 (final survey), indicating that the scale is reliable (see Table 5.2).

*Identity uncertainty.* The measure of identity uncertainty described in Chapter 4 was used. Even though some of the facets were not significantly associated with the other variables of interest in the pilot study, I retained them for further investigation. Participants were asked to consider how certain they are about the degree to which each statement about a facet of identity describes them, using a 6-point scale (1 = completely or mostly uncertain, 2 = mostly uncertain, 3 = more uncertain than certain, 4 = more certain than uncertain, 5 = mostly certain, 6 = completely or mostly certain). Items were reverse coded so that higher values indicated more uncertainty about each facet.

Four of the 48 items were dropped to produce a model that fit the data. The fit indices in the initial survey were  $\chi^2/df = 2.61$ , CFI = .90, and RMSEA = .09, the fit indices for the second survey were  $\chi^2/df = 1.78$ , CFI = .90, and RMSEA = .09, and the fit indices in the final survey were  $\chi^2/df = 1.94$ , CFI = .91, and RMSEA = .08. The CFA indicated 12 subscales. Alphas for the subscales in each survey indicate that the scale is reliable ( $\alpha = .83-.95$ , initial survey;  $\alpha = .87-.96$ , second survey;  $\alpha = .91-.96$  final survey). Based on significant correlations between the individual facets across all surveys (see Table 5.3 for results from the second survey), I created a composite score for identity uncertainty by taking the average of the 12 subscales ( $\alpha = .93$ , initial survey;  $\alpha = .93$ , second survey; and  $\alpha = .97$ , final survey). Descriptive statistics for this study are in Table 5.2.

## Analyses

To test the proposed hypotheses and research questions I computed correlations, conducted regression analyses, and tested multi-level models.

### *Tests of H1 and H2*

For H1, which predicts that identity uncertainty is negatively related to subjective well-being, I computed bivariate correlations for each of the three time periods. To test H2, which predicts that uncertainty about identities considered important to the individual has a greater impact on subjective well-being than uncertainty about identities considered less important, I performed a regression analysis. For this analysis, the dependent variable was subjective well-being, the independent variable was identity uncertainty about a particular facet, the moderating variable was contingencies of self-worth about the same particular facet, and the interaction term was the product of the independent variable and the moderator.

I also performed a multi-level model analysis to assess H1 and H2, using data from the three surveys simultaneously. I used HLM 6.0 software, which is designed to test multilevel models (Bryk & Raudenbush, 1992). The multilevel model used to test the hypotheses included two levels. The level 1 model included a variable representing whether the data came from the initial, second, or final survey, and the identity uncertainty composite score. The level 2 model included participant sex, year in school, and contingencies of self-worth, which are used to explain variance in the level 1 parameters. The level 1 model is represented by the following equation:

$$Y_{ti} = \pi_{0i} + \pi_{1i} (\text{time}) + \pi_{2i} (\text{identity uncertainty}) + e_{ti}$$

$Y_{ti}$  is the subjective well-being score  $t$  for individual  $i$ . The intercept,  $\pi_{0i}$ , represents the predicted subjective well-being score when time is zero. The time component,  $\pi_{1i}$ , is included to account for the fact that the data is a repeated measures design. Finally,  $\pi_{2i}$  represents the level of identity uncertainty. Predictors can be added to any of the equations based on the hypothesis being tested. A variable added to either of the slope equations ( $\pi_{1i}$ ,  $\pi_{2i}$ ) represents the within-person differences that are attributable to the additional variable. The test of variables entered on the slope indicates whether that variable moderates the association between the level 1 predictor and outcome variables. For this analysis, I added participant sex ( $\beta_{21}$ ), year in school ( $\beta_{22}$ ), and contingencies of self-worth ( $\beta_{23}$ ) to the identity uncertainty ( $\pi_{2i}$ ) slope.

#### *Tests of H3 and H4*

H3 proposed that identity uncertainty was positively related to the frequency of communication with a friend about an identity. Although data from the diary survey were unusable, I included a measure of communication in the survey that served as a proxy variable to the frequency of communication with a friend about an identity. For H3, then, I computed bivariate correlations between facets of identity uncertainty and willingness to self-disclose.

To test H4, which predicts that the association between communication and identity uncertainty is decreased for people with a high tolerance for uncertainty, I performed a regression analysis. The dependent variable was willingness to self-disclose, the independent variable was the composite identity uncertainty score, the moderating variable was tolerance for uncertainty, and the interaction term was the product of the independent variable and the moderator.



I also performed a multi-level model analysis to assess H3 and H4, using data from the three surveys simultaneously. The level 1 model included a variable indicating whether the data came from the initial, second, or final survey, and the identity uncertainty composite score. The level 2 model included respondent sex and tolerance for uncertainty. Year in school was initially included in the analyses, but I removed that variable because it was irrelevant to the results.

The level 1 model is represented by the following equation:

$$Y_{ti} = \pi_{0i} + \pi_{1i} (\text{time}) + \pi_{2i} (\text{identity uncertainty}) + e_{ti}$$

$Y_{ti}$  is the subjective well-being score  $t$  for individual  $i$ . The intercept,  $\pi_{0i}$ , represents the predicted willingness to self-disclose score when time is zero. The time component,  $\pi_{1i}$ , is included to account for the fact that the data is a repeated measures design. Finally,  $\pi_{2i}$  represents the level of identity uncertainty. For this analysis, I added participant sex ( $\beta_{21}$ ) and tolerance for uncertainty ( $\beta_{22}$ ) to the identity uncertainty ( $\pi_{2i}$ ) slope.

Because of the low response to the diary survey, I was unable to analyze hypotheses 5, 6, and 7.

Table 5.1

*Number of Participants for Each Survey*

<u>Participants</u>	<u>Surveys</u>							Total IS	Total SS	Total FS
	IS only	SS only	FS only	IS & SS only	IS & FS only	SS & FS only	IS, SS, & FS			
First Year Students (Admissions)	27	0	0	5	6	0	8	46	13	14
First Year Students (Public speaking course)	--	14	10	--	--	13	--	--	27	23
Non-first Year Students (Public speaking course)	--	30	0	--	--	65	--	--	90	65

*Note.* IS is an acronym for Initial Survey, SS is an acronym for Second Survey, and FS is an acronym for Final Survey. Totals for second and final surveys do not include missing data for academic year standing.

Table 5.2

*Descriptive Statistics for Scales*

	<u>Initial Survey</u>			<u>Middle Survey</u>			<u>Final Survey</u>		
	$\alpha$	$\bar{x}$	SD	$\alpha$	$\bar{x}$	SD	$\alpha$	$\bar{x}$	SD
<u>Self-disclosure</u>									
	.94	2.62	0.68	.92	2.14	0.70	.95	2.14	0.74
<u>Tolerance for Uncertainty</u>									
	.90	4.00	1.21	.91	4.05	1.19	.86	4.08	1.02
<u>Subjective Well-being</u>									
Family	.83	2.21	0.57	.90	1.92	0.70	.89	1.97	0.69
Friend	.88	1.66	0.55	.92	1.74	0.63	.91	1.88	0.70
School	.89	1.94	0.53	.83	2.31	0.62	.76	2.37	0.56
Self	.84	1.81	0.50	.85	1.87	0.59	.87	1.90	0.62
<u>Contingencies of Self-worth</u>									
Others' approval	.70	2.91	0.85	.71	2.78	0.81	.65	2.77	0.76
Appearance	.75	2.33	0.66	.74	2.35	0.65	.64	2.36	0.63
Competitiveness	.86	2.04	0.69	.85	2.04	0.70	.82	2.06	0.64
Acad. competence	.79	1.79	0.59	.77	1.82	0.54	.85	1.89	0.65
Family support	.68	2.03	0.67	.75	2.06	0.71	.70	2.14	0.71
Morality	.86	2.34	0.79	.86	2.28	0.78	.79	2.30	0.70
Spirituality	.93	2.93	1.07	.89	3.06	0.98	.90	3.03	0.90
Friend support	.79	1.99	0.60	.72	2.03	0.56	.74	2.11	0.60
Com. competence	.77	4.05	0.59	.81	4.01	0.58	.84	3.86	0.65
Physical shape	.78	4.01	0.58	.79	4.03	0.67	.79	3.97	0.73

	<u>Initial Survey</u>			<u>Middle Survey</u>			<u>Final Survey</u>		
	$\alpha$	$\bar{x}$	SD	$\alpha$	$\bar{x}$	SD	$\alpha$	$\bar{x}$	SD
Ethnicity	.63	3.12	0.66	.68	3.07	0.59	.66	3.12	0.57
Sexuality	.81	2.06	0.77	.75	2.33	0.76	.79	2.40	0.82
<u>Identity Uncertainty</u>									
Others' approval	.92	2.73	1.04	.90	2.61	1.00	.93	2.92	1.14
Appearance	.91	2.59	0.94	.93	2.77	1.12	.94	2.77	1.14
Competitiveness	.89	2.66	0.94	.88	2.51	0.93	.93	2.66	1.04
Acad. competence	.92	2.11	0.89	.91	2.18	0.95	.96	2.47	1.24
Family support	.95	1.80	1.08	.95	1.71	1.03	.94	2.20	1.40
Morality	.93	2.41	0.96	.94	2.33	1.05	.91	2.57	1.18
Spirituality	.95	2.30	1.28	.91	2.80	1.24	.95	2.94	1.34
Friend support	.93	2.27	1.07	.96	2.26	1.09	.94	2.62	1.23
Com. competence	.92	2.58	0.99	.94	2.53	1.03	.92	2.74	1.18
Physical shape	.93	2.55	1.13	.87	2.36	1.05	.93	2.48	1.28
Ethnicity	.83	2.56	1.04	.91	2.44	1.17	.93	2.62	1.24
Sexuality	.91	2.46	0.89	.93	2.32	1.05	.95	2.53	1.18

*Note.*  $N = 46$  for initial survey;  $N = 140$  for middle survey;  $N = 108$  for final survey.

Table 5.3

*Correlations between Facets of Identity, Second Survey*


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	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
V1. Others' approval	-	.62**	.74**	.70**	.49**	.62**	.37**	.85**	.74**	.55**	.40**	.60**
V2. Appearance		-	.55**	.44**	.33**	.33**	.26**	.52**	.39**	.41**	.25**	.59**
V3. Competitiveness			-	.71**	.45**	.55**	.35**	.67**	.71**	.56**	.49**	.66**
V4. Academic competence				-	.60**	.73**	.44**	.66**	.66**	.56**	.48**	.63**
V5. Family support					-	.56**	.41**	.57**	.37**	.56**	.47**	.45**
V6. Morality						-	.52**	.62**	.63**	.50**	.44**	.54**
V7. Spirituality							-	.36**	.50**	.49**	.70**	.41**
V8. Friend support								-	.66**	.51**	.43**	.56**
V9. Communication competence									-	.54**	.50**	.51**
V10. Sexuality										-	.57**	.47**
V11. Ethnicity											-	.46**
V12. Physical shape												-

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\*\* $p < .01$ .

## CHAPTER 6

In this chapter, I report the results of the preliminary analyses and the substantive analyses that test the hypotheses.

*Preliminary Analyses and Results*

To begin, I conducted a series of preliminary analyses. Specifically, I evaluated demographic differences in the data, and I examined the distribution of variance between the two levels of the HLM analysis.

*Demographic differences.* As a starting point, I examined whether any of the variables of interest (subjective well-being, contingencies of self-worth, identity uncertainty, willingness to self-disclose, and tolerance for uncertainty) were related to demographic characteristics. The demographic variables in this study included sex, age, relationship status, ethnicity, and year in school. I conducted a series of t-tests or analyses of variance with subjective well-being, contingencies of self-worth, identity uncertainty, willingness to self-disclose, and tolerance for uncertainty from the initial, second, and final surveys as dependent variables and the demographic characteristics as independent variables. The dependent variables were evaluated in separate analyses, and separate analyses were conducted using data from the initial, second, and final surveys.

Results indicated no differences associated with age, relationship status, or ethnicity. There were, however, sex differences for 3 of the 12 facets of contingencies of self-worth, 2 of the 12 facets of identity uncertainty, self-disclosure, and tolerance for uncertainty (see Table 6.1), and year in school differences for 4 of the 12 facets of identity uncertainty (see Table 6.2). Because of the large number of tests required to assess the multiple contingencies of self-worth and facets of identity uncertainty, only those

dependent variables that differed by sex or year in school in at least one of the surveys are reported in the table.

For the contingencies of self-worth measure, an overall sex difference was found for the initial, second, and final surveys for morality. An overall sex difference in spirituality was found for the initial and final surveys. An overall sex difference was also found between the second and final surveys for facets related to family support. Males reported that morals and spirituality were more relevant to their self-worth than females for both the initial and final surveys. In the second survey, morality was more important to the self-worth of females, relative to males. In addition, family support was more important to self-worth for females than for males for the second and final surveys.

Analyses of the variables identity uncertainty, self-disclosure, and tolerance for uncertainty also yielded sex differences. An overall sex difference was found for the first and final surveys for facets of identity uncertainty related to appearance and physical shape. Females reported more uncertainty about appearance and physical shape for the first and final surveys than males. An overall sex difference was found in the second and final surveys for the self-disclosure measure. Females reported more self-disclosure than males in both the second and final surveys. Finally, an overall sex difference was found in the second and final surveys for tolerance for uncertainty. Males reported a higher tolerance for uncertainty than females in the second and final surveys.

With respect to year in school differences, results indicated no significant year in school differences for subjective well-being, contingencies of self-worth, self-disclosure, and tolerance for uncertainty. There were, however, year in school differences for four of the twelve facets of identity uncertainty. An overall year in school difference was found

for the second and final surveys for facets of identity uncertainty related to others' approval, family support, and friend support. An overall year in school difference was found for the second survey for identity uncertainty about communication competence. In all cases, first year students reported more uncertainty about each of these facets, relative to non-first year students.

Given the sex and year in school differences revealed by these analyses, I included these variables as covariates in my regression and HLM analyses.

*Intraclass correlation analysis and results.* For the HLM analyses, I computed the intraclass correlations ( $\rho$ ) for subjective well-being and willingness to self-disclose as the dependent variables in the study. The intraclass correlation calculates the proportion of variance in the dependent variable that can be attributed to between-persons or within-person variance. A  $\rho$  closer to 1 indicates that most of the variance in the dependent variable is based on between-persons differences, whereas  $\rho$  closer to 0 indicates that most of the variance in the dependent variable is based on within-person differences (Kreft & De Leeuw, 2002; Snijders & Bosker, 2003). The intraclass correlation for subjective well-being ( $\rho = .73$ ) and the intraclass correlation for willingness to self-disclose ( $\rho = .63$ ), suggest that variation in subjective well-being and willingness to self-disclose is a function of between-persons variation. This observation contributed to my decision to test moderators (i.e., sex, year in school, contingencies of self-worth, and tolerance for uncertainty) on the slope of substantive predictors and not on the slope for the variables representing within person changes over time.



## Tests of Hypotheses

### *Identity Uncertainty and Subjective Well-being (H1)*

H1 predicted that identity uncertainty would be negatively correlated with subjective well-being. To test H1, first I computed bivariate correlations for each of the three surveys. Then, I also computed bivariate correlations separately for first year students and non-first year students using data from the second and final surveys. Because of the smaller sample sizes for the first and final surveys, I considered the magnitude of the correlations from the second survey and established  $r = \pm .20$  as a critical value to facilitate comparisons between surveys (Cohen, 1992). These correlations are reported on Table 6.3.

As predicted by H1, there was a negative association between identity uncertainty and subjective well-being (significant  $r$ 's for facets of identity uncertainty and subjective well-being ranged from  $-.35$  to  $-.38$  for the initial survey, from  $-.17$  to  $-.63$  for the second survey, and from  $-.19$  to  $-.39$  for the final survey). The correlations between the composite measure of identity uncertainty and the composite measure of subjective well-being for the second and final survey were also significant (second survey,  $r = -.43$ ,  $p < .001$ ; final survey,  $r = -.28$ ,  $p < .001$ ). Within the second survey, the correlation between the composite measure of identity uncertainty and the composite measure of subjective well-being for non-first year students was significant ( $r = -.59$ ,  $p < .001$ ), but it was not significant for first year students ( $r = -.20$ , ns). For the final survey, the correlation between the composite measure of identity uncertainty and the composite measure of subjective well-being for both the first year students ( $r = -.41$ ,  $p < .05$ ) and the non-first year students ( $r = -.30$ ,  $p < .05$ ) was significant.

*Initial survey.* For the initial survey ( $N = 45$ ), 27% of the correlations between individual facets of identity uncertainty and subjective well-being met or exceeded the critical value; and 15% of those were statistically significant (see Table 6.3). Uncertainty about others' approval, morality, and friend support, communication competence, and sexuality were negatively correlated with friend satisfaction. Uncertainty about others' approval, appearance, academic competence, morality, and friend support were negatively associated with satisfaction with school. Uncertainty about appearance, friend support, and sexuality were negatively correlated with satisfaction with the self. Uncertainty about appearance was negatively correlated with satisfaction with school and the self. None of the facets of identity uncertainty were correlated with family satisfaction, and uncertainty about competitiveness, family support, spirituality, ethnicity, and physical shape were not correlated with any of the aspects of subjective well-being. These results suggest some facets of identity are negatively associated with subjective well-being for first year students prior to the start of their college experience.

*Second survey.* For the second survey ( $N = 140$ ), approximately 73% of the individual facets of identity uncertainty were significantly and negatively correlated with different aspects of subjective well-being (see Table 6.3). Uncertainty about others' approval, academic competence, family support, morality, friend support, and communication competence were negatively correlated with family satisfaction, friend satisfaction, satisfaction with school, and satisfaction with the self. Uncertainty about appearance, competitiveness, sexuality, and physical shape were negatively correlated with friend satisfaction and satisfaction with the self. Uncertainty about spirituality was negatively correlated with satisfaction with school and the self. Uncertainty about

ethnicity was negatively correlated with friend satisfaction. These results indicate that identity uncertainty is strongly related to satisfaction with the self. Moreover, uncertainty about others' approval, academic competence, family support, morality, friend support, and communication competence were correlated with all areas of subjective well-being.

To explore differences in these associations for first year students and non-first year students, I computed correlations between identity uncertainty and subjective well-being separately for first year students and for non-first year students. Within the first year student sample in the second survey ( $N = 40$ ), approximately 52% of correlations between the individual facets of identity uncertainty and areas of subjective well-being met or exceeded the critical value of  $r = \pm .20$ ; 12% of the correlations exceeding the critical value were statistically significant. All aspects of identity uncertainty were negatively associated with friend satisfaction. Uncertainty about others' approval, academic competence, family support, morality, friend support, and sexuality were negatively correlated with satisfaction with school. Uncertainty about others' approval, academic competence, family support, friend support, and sexuality was negatively correlated with satisfaction with the self. None of the facets of identity were associated with family satisfaction. Friend satisfaction appears to be closely related to identity uncertainty for first-year students, which is consistent with the results from the initial survey.

Within the non-first year student sample in the second survey ( $N = 90$ ), approximately 63% of the bivariate correlations exceeded the critical value; 87% of those were significant. All of the facets of identity uncertainty except for spirituality and physical shape were associated with friend satisfaction. Uncertainty about others'

approval, academic competence, family support, morality, friend support, and communication competence were negatively correlated with family satisfaction, satisfaction with school, and satisfaction with the self. Uncertainty about appearance and competitiveness was also negatively correlated with satisfaction with the self.

Uncertainty about spirituality and physical shape was not correlated with any of the aspects of subjective well-being. These results suggest that uncertainty about others' approval, family support, morality, friend support, and communication competence are especially relevant to a non-first year student's subjective well-being. Furthermore, identity uncertainty is strongly correlated with friend satisfaction and satisfaction with the self for these students.

*Final survey.* In the final survey ( $N = 108$ ), approximately 58% of the individual facets of identity uncertainty were significantly and negatively correlated with different aspects of subjective well-being (see Table 6.3). Uncertainty about others' approval, family support, communication competence, and physical shape were negatively correlated with family satisfaction, friend satisfaction, satisfaction with school, and satisfaction self. Uncertainty about friend support, sexuality, and ethnicity were negatively correlated with family satisfaction, friend satisfaction, and satisfaction with the self. Uncertainty about morality was negatively correlated with family satisfaction, satisfaction with school, and satisfaction with the self. Uncertainty about competitiveness and academic competence were negatively correlated with family satisfaction and satisfaction with the self. Uncertainty about appearance was negatively correlated with friend satisfaction and satisfaction with the self. Uncertainty about spirituality was not correlated with any of the aspects of subjective well-being. As with the other results, data

from the final survey indicated that identity uncertainty is strongly related to satisfaction with the self. These results also suggest that identity uncertainty is strongly associated with family satisfaction.

Within the first year student sample in the final survey ( $N = 35$ ), approximately 96% of the correlations between individual facets of identity uncertainty and subjective well-being exceeded the critical value; 65% of those were statistically significant. Identity uncertainty about each of the facets was negatively correlated with all of the areas of subjective well-being, with the exception of uncertainty about spirituality and satisfaction with school and the self. Uncertainty about others' approval, appearance, competitiveness, academic competence, family support, morality, friend support, communication competence, sexuality, ethnicity, and physical shape were related to each of the aspects of subjective well-being for first year students; uncertainty about spirituality was only related to family satisfaction and friend satisfaction.

Within the non-first year student sample in the final survey ( $N = 65$ ), approximately 58% of the correlations met or exceeded the critical value of  $r = \pm .20$ ; 46% of those were significant. Uncertainty about each of the facets of identity, except for spirituality and sexuality, was associated with satisfaction with the self. Uncertainty about others' approval, academic competence, family support, morality, friend support, and physical shape were related to family satisfaction. Uncertainty about others' approval, appearance, friend support, communication competence, sexuality, and physical shape was associated with friend satisfaction. Uncertainty about others' approval, academic competence, family support, morality, friend support, and physical shape was correlated with satisfaction with school. Uncertainty about spirituality was not

related to any of the aspects of subjective well-being. For the non-first year students, identity uncertainty about others' approval, friend support, and physical shape is strongly associated with subjective well-being, however many facets of identity uncertainty do not seem to affect subjective well-being for the final survey.

In summary, results suggest strong support for the hypothesis that identity uncertainty is negatively associated with subjective well-being. The patterns in the results for first year students and non-first year students are not wholly consistent with regard to which aspects of identity uncertainty affect which areas of subjective well-being, but overall, there is a pervasive pattern of negative correlations between the two sets of variables.

*Identity Uncertainty, Contingencies of Self-worth, and Subjective Well-being (H2)*

I predicted that uncertainty about identities considered important to self-worth have a greater impact on subjective well-being than uncertainty about identities considered less important (H2). To test this hypothesis, I conducted regression analyses for each of the facets of identity for the initial survey (see Table 6.4), second survey (see Table 6.5), and final survey (see Table 6.6). On the first step of the analysis of data from the initial survey, I regressed the dependent variable onto contingencies of self-worth, identity uncertainty, and respondent sex. Respondent sex was included because of the significant sex differences revealed in the preliminary analyses. On step 2, I added product terms representing all of the two-way interactions. The two-way interaction term for identity uncertainty and contingencies of self-worth provides the test of H2. On the final step, I added a variable representing the three-way interaction among sex, identity uncertainty, and contingencies of self-worth. The model evaluating data from the second

and final surveys was similar, except that year in school was also included as a covariate, and the two, three, and four-way interactions involving this additional variable were also evaluated.

*Initial survey.* Results from Step 1 indicated no significant main effects, but Step 2 did reveal four two-way interactions (see Table 6.4). Results for Step 3 were not significant.

Only one of the significant two-way interactions addressed the predicted interaction between identity uncertainty and contingencies of self-worth. Specifically, there was a significant interaction between contingencies of self-worth and identity uncertainty for the physical shape facet of identity,  $R^2\Delta = .22, p < .05$ . To clarify the form of this interaction, I followed the guidelines recommended by Aiken and West (1991). For this analysis, I centered contingencies of self-worth around its mean, and also created variables for contingencies of self-worth that were one standard deviation below and above the mean. Then, I reran the regression model three times, substituting the three new terms.

Results indicated that for participants who reported high ( $slope = -.32, \beta = -.69, p < .05$ ) and average ( $slope = -.30, \beta = -.66, p < .05$ ) degrees of importance of physical shape to the self, identity uncertainty about physical shape had a greater impact on subjective well-being than those that reported a low ( $slope = -.29, \beta = -.63, ns$ ) degree of importance of physical shape to the self. The trend indicates that the more important physical shape is, the greater the negative association between identity uncertainty about physical shape and well being.

Results also revealed three significant two-way interactions between participant sex and identity uncertainty about others' approval,  $R^2\Delta = .21, p < .05$ , identity uncertainty about academic competence,  $R^2\Delta = .19, p < .05$ , and identity uncertainty about morality,  $R^2\Delta = .16, p < .05$ . The form of these interactions indicated that identity uncertainty about others' approval had a greater impact on subjective well-being for females ( $slope = -.35, \beta = -.91, p < .01$ ) than for males ( $slope = .02, \beta = .06, ns$ ). In addition, identity uncertainty about academic competence had a greater impact on subjective well-being for females ( $slope = -.30, \beta = -.64, p < .05$ ) than for males ( $slope = -.11, \beta = -.25, ns$ ). As with the previous results, identity uncertainty about morality had a greater impact on subjective well-being for females ( $slope = -.42, \beta = -.99, p < .01$ ) than for males ( $slope = .02, \beta = .04, ns$ ).

*Second survey.* Recall that for the second survey, I entered sex, year in school, contingencies of self-worth, and identity uncertainty on Step 1. Then, I entered the two-way interactions on Step 2, the three-way interactions on Step 3, and finally the four-way interaction on Step 4. Results indicated several significant main effects for Step 1, several significant two-way interactions on Step 2, no significant results for Step 3, and two four-way interactions on Step 4 (see Table 6.5).

Results indicated a significant main effect of identity uncertainty on subjective well-being for others' approval, appearance, competitiveness, academic competence, family support, morality, friend support, communication competence, sexuality, and ethnicity. Betas for each of the facets of identity uncertainty show that doubts about others' approval, friend support, academic competence, morality, family support,



communication competence, sexuality, appearance, competitiveness, and ethnicity have negative associations with on subjective well-being. These results support H1.

A significant main effect was found for contingencies of self-worth about academic competence, family support, and communication competence on subjective well-being. The betas for each of the facets indicated that people who reported that their self-worth was contingent on family support and academic competence reported higher subjective well-being. Conversely, people whose self-worth depended on communication competence reported lower subjective well-being.

There were also several significant main effects related to participant sex. The analyses revealed a main effect of sex in six of the twelve regression models. Overall, females reported greater levels of subjective well-being ( $M = 2.02$ ,  $SD = 0.54$ ) than males ( $M = 1.81$ ,  $SD = 0.46$ ).

Results revealed the predicted two-way interaction between contingencies of self-worth and identity uncertainty for others' approval,  $R^2\Delta = .15$ ,  $p < .01$ . The form of this interaction indicated that identity uncertainty about others' approval was negatively associated with subjective well-being across a high ( $slope = -.40$ ,  $\beta = -.78$ ,  $p < .01$ ), average ( $slope = -.25$ ,  $\beta = -.50$ ,  $p < .01$ ), low ( $slope = -.14$ ,  $\beta = -.28$ ,  $p < .01$ ) degrees of importance of others' approval to the self. As predicted, identity uncertainty about others' approval had a more negative association with subjective well-being when others' approval is more important to the person's self. A significant interaction between year in school and identity uncertainty about others' approval was also revealed,  $R^2\Delta = .21$ ,  $p < .05$ . Results indicated that identity uncertainty about others' approval had a greater

negative impact on subjective well-being for first year students ( $slope = -.37, \beta = -.73, p < .01$ ) than for non-first year students ( $slope = -.11, \beta = -.22, ns$ ).

In the analysis focusing on appearance as the facet of identity, there was a significant four-way interaction between contingencies of self worth about appearance, identity uncertainty about appearance, participant sex, and year in school,  $R^2\Delta = .05, p < .05$ . The slopes clarifying the form of this interaction are in Table 6.7. For males, the association between identity uncertainty focused on appearance and subjective well-being is significant and negative across all levels of contingencies of self-worth and year in school. For females, however, the significance of this association varies. For non-first year females, the association is significant and negative at all levels of contingencies of self-worth; more so when contingencies of self worth is high. For first year females, the negative association between identity uncertainty and subjective well-being is significant only when contingencies of self-worth is high. Notably, across all cells in Table 6.7, the estimate of the association is higher for females relative to males.

A significant two-way interaction between contingencies of self-worth about family support and identity uncertainty about family support was found for the second survey,  $R^2\Delta = .14, p < .01$ . Specifically, for participants who reported high ( $slope = -.44, \beta = -.86, p < .01$ ) and average ( $slope = -.28, \beta = -.54, p < .05$ ) levels of importance of family support to the self, identity uncertainty about family support had a greater negative effect on subjective well-being than participants who reported low ( $slope = -.14, \beta = -.27, ns$ ) levels of importance. In other words, the more important family support is to the self, the greater impact identity uncertainty about family support has on subjective well-being.

There was also a significant two-way interaction between identity uncertainty about friend support and contingencies of self-worth about friend support,  $R^2\Delta = .14, p < .01$ . The form of this interaction indicated that identity uncertainty about friend support was negatively associated with subjective well-being across low ( $slope = -.26, \beta = -.54, p < .01$ ), average ( $slope = -.40, \beta = -.76, p < .01$ ), and high ( $slope = -.70, \beta = -1.45, p < .01$ ) levels of importance of friend support to the self. As expected, the more important friend support was to the self, the greater the negative association between identity uncertainty about friend support and subjective well-being. There was also a significant interaction between identity uncertainty about friend support and year in school,  $R^2\Delta = .14, p < .01$ . Results indicated that identity uncertainty about friend support had a greater impact on subjective well-being for non-first year students ( $slope = -.36, \beta = -.74, p < .01$ ) than for first year students ( $slope = -.12, \beta = -.26, ns$ ).

Results suggested that the impact of identity uncertainty about communication competence on subjective well-being depends on the participants' year in school,  $R^2\Delta = .10, p < .05$ . Identity uncertainty about communication competence for non-first year students ( $slope = -.20, \beta = -.40, p < .01$ ) had more of an effect on subjective well-being than for first year students ( $slope = -.09, \beta = -.18, ns$ ). There was also a significant interaction between identity uncertainty about communication competence and participant sex,  $R^2\Delta = .10, p < .05$ , such that identity uncertainty about communication competence had a greater impact on subjective well-being for females ( $slope = -.30, \beta = -.58, p < .01$ ) than for males ( $slope = -.08, \beta = -.16, ns$ ).

There was a significant four-way interaction between contingencies of self worth about ethnicity, identity uncertainty about ethnicity, participant sex, and year in school,

$R^2\Delta = .04, p < .05$ . The slopes clarifying this form of the interaction are in Table 6.8. For first year students and female non-first year students, there were no significant associations. For non-first year males, however, the association between identity uncertainty about ethnicity and subjective well-being is more negative as contingencies of self-worth about ethnicity increases.

*Final survey.* As with the second survey, the analysis for the final survey included year in school on Step 1. Results indicated several significant main effects for Step 1, several significant two-way interactions on Step 2, and no significant results on Steps 3 or 4.

Results indicated a significant main effect of identity uncertainty on subjective well-being for others' approval, appearance, competitiveness, academic competence, family support, morality, friend support, communication competence, sexuality, ethnicity, and physical shape (see Table 6.6). Betas for each of the facets of identity uncertainty show that others' approval, friend support, academic competence, morality, family support, communication competence, sexuality, appearance, competitiveness, ethnicity, and physical shape have negative effects on subjective well-being. These results support H1.

A significant main effect was found for contingencies of self-worth about appearance, academic competence, family support, morality, friend support, communication competence, and physical shape on subjective well-being. The betas for each of the facets indicated that the extent to which self-worth depended on academic competence, family support, friend support, and morality had a positive effect on subjective well-being. The betas for communication competence and physical shape

indicate a negative association between these contingencies of self-worth and subjective well-being.

There were also two significant main effects related to participant sex. The analyses revealed a main effect of sex on subjective well-being in the analyses focused on sexuality and ethnicity. Females report greater levels of subjective well-being ( $M = 2.09$ ,  $SD = 0.54$ ) than males ( $M = 1.84$ ,  $SD = 0.58$ ).

A significant two-way interaction between identity uncertainty about morality and contingencies of self-worth about morality,  $R^2\Delta = .07$ ,  $p < .05$ , was found. Specifically, for participants who reported high levels of importance of morality to the self, identity uncertainty about morality had a greater effect on subjective well-being ( $slope = -.36$ ,  $\beta = -.72$ ,  $p < .01$ ) than participants who reported an average ( $slope = -.20$ ,  $\beta = -.44$ ,  $p < .05$ ) or low ( $slope = -.11$ ,  $\beta = -.26$ ,  $ns$ ) levels of importance. In other words, the more important morality is to the self, the greater negative association between identity uncertainty morality and subjective well-being.

There was also a significant two-way interaction between identity uncertainty about ethnicity and contingencies of self-worth about ethnicity,  $R^2\Delta = .11$ ,  $p < .01$ . The form of this interaction indicated that identity uncertainty about ethnicity was negatively associated with subjective well-being across low ( $slope = -.32$ ,  $\beta = -.64$ ,  $p < .01$ ), average ( $slope = -.46$ ,  $\beta = -.78$ ,  $p < .01$ ), and high ( $slope = -.68$ ,  $\beta = -.92$ ,  $p < .01$ ) levels of importance of ethnicity to the self. Per H2, the more important ethnicity was to the self, the greater the negative association between identity uncertainty about ethnicity and subjective well-being.

A final significant two-way interaction was found between identity uncertainty about physical shape and contingencies of self-worth about physical shape,  $R^2\Delta = .13$ ,  $p < .01$ . Results indicated that identity uncertainty about physical shape for participants reporting a high ( $slope = -.36$ ,  $\beta = -.72$ ,  $p < .05$ ) and average ( $slope = -.28$ ,  $\beta = -.64$ ,  $p < .05$ ) degree of importance of this facet to the self had a greater negative association between subjective well-being and identity uncertainty than those that reported a low ( $slope = -.22$ ,  $\beta = -.52$ ,  $ns$ ) degree of importance of physical shape to the self. The more important physical shape is to self-worth, the greater the negative association between identity uncertainty about physical shape and well being.

Together, these results suggest that the importance of an identity about others' approval, appearance, family support, friend support, and ethnicity to the self does affect the impact of identity uncertainty for the respective facet of identity on subjective well-being. Specifically, participants who reported that these facets of identity were important to them showed more negative associations between uncertainty about that identity and subjective well-being. Some of the associations are contingent on participant sex and year in school, but the overall pattern is consistent with the hypothesis.

#### *Hierarchical Linear Modeling Tests of H1 and H2*

To explore these associations further, I analyzed the data using HLM 6.0 software. The following equation represents the model that was used to test the impact of identity uncertainty on subjective well-being. Identical models were used for each of the facets of identity by substituting each corresponding variable for identity uncertainty and contingencies of self-worth.

Level 1:

$$Y_{ti} = \pi_{0i} + \pi_{1i} (\text{time}) + \pi_{2i} (\text{identity uncertainty}) + e_{ti}$$

Level 2:

$$\pi_{0i} = \beta_{00} + r_{0i}$$

$$\pi_{1i} = \beta_{10} + r_{1i}$$

$$\pi_{2i} = \beta_{20} + \beta_{21} (\text{participant sex}) + \beta_{22} (\text{year in school}) + \beta_{23} (\text{contingencies of self-worth}) + r_{2i}$$

Results of the twelve models testing the different facets of identity are summarized in Table 6.9. Results for time indicated that subjective well-being generally increased over the course of the semester, and the coefficient for this variable was statistically significant in 2 of the 12 models. H1 predicted that there is negative association between identity uncertainty and subjective well-being. The results from the model show that each of the facets of identity uncertainty, except for communication competence, sexuality, and physical shape, was negatively associated with subjective well-being (see Table 6.9). Identity uncertainty about communication competence was significantly and positively related to subjective well-being. Identity uncertainty about sexuality and physical shape were not significantly associated with subjective well-being.

For identity uncertainty about others' approval and appearance, the association between identity uncertainty and subjective well-being was less negative for females. The results for the effect of identity uncertainty about competitiveness on subjective well-being showed no sex differences, but did suggest that the association between identity uncertainty about competitiveness with subjective well-being is more negative when contingencies of self-worth about competitiveness is high. Similar results were found for uncertainty about academic competence, family support, and friend support. The relationship between identity uncertainty about each specific facet with subjective well-

being is more negative when contingencies of self-worth about the same specific facet is high. Results suggest that for uncertainty about communication competence, the relationship between identity uncertainty and subjective well-being is less positive when contingencies of self-worth about communication competence is high. Finally, results for uncertainty about ethnicity suggest that there is a negative association between identity uncertainty about ethnicity and subjective well-being, less so for females, and that the association is less negative when contingencies of self-worth about ethnicity is high.

Although the results are not wholly consistent, the prominent pattern is a negative association between identity uncertainty and subjective well-being. Moreover, when the facet is important to the self, the impact of identity uncertainty about that facet on subjective well-being tends to be more negative.

### *Identity Uncertainty and Communication (H3)*

H3 predicted that identity uncertainty would be positively correlated with the frequency of communication about an identity. Because the response rate for the diary study was insufficient, I tested this hypothesis with self-reported measures of willingness to self-disclose. To test this hypothesis, I computed the bivariate correlation between facets of identity uncertainty and willingness to self-disclose. The association between willingness to self-disclose and the composite identity uncertainty score was significant and negative for the initial and second surveys (see Table 6.10). Using a critical value of  $r = \pm .20$ , I also examined the correlations between the willingness to self-disclose and the individual facets of identity uncertainty. These correlations are reported in Table 6.11.

*Initial survey.* The correlations between identity uncertainty and willingness to self-disclose revealed approximately two-thirds of the facets of identity uncertainty



exceed the critical value; 88% of those associated were also statistically significant. Uncertainty about others' approval, family support, morality, spirituality, friend support, communication competence, sexuality, and physical shape were negatively related to willingness to self-disclose. In other words, as uncertainty about an identity increased, the willingness to self-disclose decreased. These patterns run contrary to H3.

*Second survey.* Approximately 58% of the facets of identity uncertainty were significantly negatively correlated with willingness to self-disclose (see Table 6.11). Uncertainty about others' approval, academic competence, family support, morality, spirituality, friend support, and communication competence were negatively related to willingness to self-disclose.

For first year students, approximately 58% of the facets of identity uncertainty exceeded the critical value; none was significantly correlated with willingness to self-disclose. Uncertainty about others' approval, competitiveness, academic competence, family support, morality, friend support, and communication competence were negatively associated with willingness to self-disclose. Half of the facets of identity uncertainty were significantly negatively correlated with willingness to self-disclose for non-first year students. Uncertainty about others' approval, family support, morality, spirituality, friend support, and communication competence were negatively associated with willingness to self-disclose.

*Final survey.* In the final survey, none of the facets of identity uncertainty was significantly negatively correlated with willingness to self-disclose, and none reached the critical value. For first year students, only uncertainty about friend support, communication competence, and ethnicity exceeded the critical value, but none was

significantly negatively correlated with willingness to self-disclose for first year students. For non-first year student, only uncertainty about others' approval and friend support exceeded the critical value, but neither was significantly negatively correlated with willingness to self-disclose.

Taken together, these results suggest that as identity uncertainty increases, the willingness to self-disclose decreases, which is inconsistent with H3.

*Tolerance for Uncertainty, Identity Uncertainty, and Willingness to Self-disclose (H4)*

I predicted that identity uncertainty was related to communication about the identity, and that this association was moderated by tolerance for uncertainty (H4). To test this hypothesis, I conducted a regression analysis for each of the surveys. For this model, the dependent variable was willingness to self-disclose, the independent variable was the composite identity uncertainty score, and the moderating variable was tolerance for uncertainty. On the first step of the analysis of data from the initial survey, I regressed the dependent variable onto tolerance for uncertainty, identity uncertainty, and respondent sex. On step 2, I added product terms representing all of the two-way interactions. On the final step, I added a variable representing the three-way interaction among sex, identity uncertainty, and tolerance for uncertainty. The model evaluating data from the second and final surveys was similar, except that year in school was also included as a covariate, and the two, three, and four-way interactions involving this additional variable were also evaluated.

None of the results for the initial survey were significant (Step 1:  $R^2\Delta = .16$ , *ns*; Step 2:  $R^2\Delta = .02$ , *ns*; Step 3:  $R^2\Delta = .04$ , *ns*). For the second survey, results revealed a main effect for identity uncertainty on Step 1,  $R^2\Delta = .20$ ,  $p < .01$ . The beta for identity

uncertainty suggests that identity uncertainty has a negative association with willingness to self-disclose ( $\beta = -.19$ ). Results indicated that the proportion of variance explained by variables added on Step 2 ( $R^2\Delta = .05, ns$ ), Step 3 ( $R^2\Delta = .02, ns$ ), and Step 4 ( $R^2\Delta = .00, ns$ ) were not significant. For the final survey, there were no significant results for Step 1 ( $R^2\Delta = .09, ns$ ), Step 2 ( $R^2\Delta = .18, ns$ ), Step 3 ( $R^2\Delta = .01, ns$ ), or Step 4 ( $R^2\Delta = .00, ns$ ).

Together, these results suggest a negative association between identity uncertainty and willingness to self-disclose for the second survey. Tolerance for uncertainty does not appear to influence this association. There is also no significant year in school or sex differences. These results support neither H3 nor H4.

#### *Hierarchical Linear Modeling Tests of H3 and H4*

To test the data across all time points, I conducted an HLM analysis. The following equation represents the model that was used to test the impact of identity uncertainty on willingness to self-disclose.

Level 1:

$$Y_{ti} = \pi_{0i} + \pi_{1i} (\text{time}) + \pi_{2i} (\text{identity uncertainty}) + e_{ti}$$

Level 2:

$$\pi_{0i} = \beta_{00} + r_{0i}$$

$$\pi_{1i} = \beta_{10} + r_{1i}$$

$$\pi_{2i} = \beta_{20} + \beta_{21} (\text{participant sex}) + \beta_{22} (\text{tolerance for uncertainty}) + r_{2i}$$

The results from the model (see Table 6.12) show a significant negative trend overtime, such that people reported less self-disclosure over the course of the semester. In the HLM, identity uncertainty was not significantly associated with willingness to self-disclose. This association was significantly lower for females, relative to males. Finally, tolerance for uncertainty did not impact the effect of identity uncertainty on willingness to self-disclose, which run counter to H4.

To summarize, identity uncertainty does predict willingness to self-disclose. The more uncertain about identity a person is, the less likely he or she is to self-disclose. This effect is more so for males, and tolerance for uncertainty does not appear to moderate this association.

### Chapter Summary

This chapter reported the results of the main study in this dissertation. Results from the analyses indicate that identity uncertainty is negatively associated with subjective well-being, and that the relationship is moderated by contingencies of self-worth. In other words, when a facet of identity is important to the self, the association between identity uncertainty about that facet and subjective well-being is more negative. Results also suggest that identity uncertainty and willingness to self-disclose are negatively associated, and tolerance for uncertainty does not significantly impact that relationship. Several patterns association with year in school and respondent's sex also surfaced in the analyses. The implications of these results will be discussed in the next chapter.

Table 6.1

*Sex Differences*

	<u>Initial Survey</u>		<u>Second Survey</u>		<u>Final Survey</u>	
	Males	Females	Males	Females	Males	Females
<u>Contingencies of Self-worth</u>						
Morality	2.83 (0.66) <i>F</i> = 7.05*	1.92 (0.72)	2.01 (0.68)	2.34 (0.72) <i>F</i> = 4.67*	3.17 (0.57) <i>F</i> = 5.62*	2.19 (0.62)
Spiritual	3.58 (0.57) <i>F</i> = 5.08*	2.47 (0.63)	3.23 (1.13) <i>F</i> = 1.02	3.01 (0.93)	3.67 (0.71) <i>F</i> = 4.98*	2.39 (0.67)
Family Support	2.12 (0.69) <i>F</i> = 1.03	1.94 (0.65)	1.57 (0.74) <i>F</i> = 15.66**	2.18 (0.66)	1.70 (0.70) <i>F</i> = 9.22*	2.18 (0.59)
<u>Identity Uncertainty</u>						
Appearance	1.04 (1.00) <i>F</i> = 5.10*	2.22 (1.14)	1.49 (0.98) <i>F</i> = 1.06	1.54 (1.21)	1.12 (1.12) <i>F</i> = 5.14*	2.34 (1.25)
Physical Shape	1.26 (1.09) <i>F</i> = 7.91*	2.61 (1.11)	1.53 (0.87) <i>F</i> = 1.58	1.33 (1.07)	1.31 (1.13) <i>F</i> = 9.86*	3.25 (1.16)
<u>Self-disclosure</u>						
	2.44 (0.58) <i>F</i> = 1.22	2.33 (0.75)	2.46 (0.73) <i>F</i> = 10.04**	2.98 (0.76)	2.40 (0.84) <i>F</i> = 11.16**	2.93 (0.75)
<u>Tolerance for Uncertainty</u>						
	4.09 (1.24) <i>F</i> = 0.80	4.00 (1.22)	4.63 (0.68) <i>F</i> = 8.92**	4.02 (0.71)	4.61 (0.66) <i>F</i> = 9.27**	3.78 (0.66)

*Note.* *N* = 45, initial survey; *N* = 141, second survey; *N* = 108 final survey. Cell entries are means, parenthetical values are SDs.

\**p* < .05, \*\**p* < .01.

Table 6.2

*Year in School Differences for Identity Uncertainty*

	<u>Second Survey</u>		<u>Final Survey</u>	
	FYS	NFYS	FYS	NFYS
Others' Approval	3.00	2.49	3.12	2.81
	(1.13)	(0.91)	(1.23)	(1.07)
	$F = 2.72^*$		$F = 2.69^*$	
Family Support	2.00	1.61	2.45	2.03
	(1.40)	(0.84)	(1.58)	(1.25)
	$F = 2.83^*$		$F = 2.76^*$	
Friend Support	2.74	2.08	2.84	2.48
	(1.34)	(0.94)	(1.31)	(1.13)
	$F = 3.80^*$		$F = 2.81^*$	
Communication Competence	2.90	2.41	2.86	2.68
	(1.17)	(0.95)	(1.27)	(1.07)
	$F = 2.73^*$		$F = 0.92$	

*Note.*  $N = 140$ , second survey;  $N = 108$ , final survey. Data from the initial survey, which included only first year students, are not included. Cell entries are means, parenthetical values are SDs. FYS is an acronym for first year students, NFYS is an acronym for non-first year students.

\* $p < .05$ .

Table 6.3

*Correlations between Identity Uncertainty and Subjective Well-being*

<u>Identity Uncertainty</u>	<u>Facet of Subjective Well-being</u>			
	Family satisfaction	Friend satisfaction	Satisfaction with school	Satisfaction with self
<u>Initial Survey</u>				
Others' approval	.01	-.35*	-.20 <sup>†</sup>	-.17
Appearance	-.10	-.11	-.21 <sup>†</sup>	-.22 <sup>†</sup>
Competitiveness	.01	-.11	-.19	-.04
Academic competence	.05	-.14	-.26 <sup>†</sup>	-.11
Family support	-.06	-.19	-.12	-.05
Morality	-.08	-.28 <sup>†</sup>	-.28 <sup>†</sup>	-.17
Spirituality	.13	-.12	-.16	-.07
Friend support	-.07	-.38**	-.21 <sup>†</sup>	-.21 <sup>†</sup>
Communication competence	.00	-.27 <sup>†</sup>	-.16	-.10
Sexuality	-.15	-.29 <sup>†</sup>	-.10	-.22 <sup>†</sup>
Ethnicity	.00	-.04	-.14	-.04
Physical shape	.15	.11	.13	.04
<u>Second Survey</u>				
Others' approval	-.32**	-.48**	-.36**	-.49**
First year students	-.13	-.38 <sup>†</sup>	-.30 <sup>†</sup>	-.38 <sup>†</sup>
Non-first year students	-.42**	-.61**	-.37**	-.54**

<u>Identity Uncertainty</u>	<u>Facet of Subjective Well-being</u>			
	Family satisfaction	Friend satisfaction	Satisfaction with school	Satisfaction with self
Appearance	-.08	-.19*	-.16	-.37**
First year students	-.06	-.32 <sup>†</sup>	-.14	-.12
Non-first year students	-.11	-.24 <sup>†</sup>	-.05	-.49**
Competitiveness	-.11	-.23**	-.13	-.30**
First year students	.13	-.26 <sup>†</sup>	-.07	-.07
Non-first year students	-.15	-.23 <sup>†</sup>	-.07	-.36**
Academic competence	-.23**	-.36**	-.36**	-.44**
First year students	-.13	-.46*	-.26 <sup>†</sup>	-.37 <sup>†</sup>
Non-first year students	-.25 <sup>†</sup>	-.34**	-.37**	-.46**
Family support	-.34**	-.39**	-.26**	-.30**
First year students	-.32 <sup>†</sup>	-.59**	-.38 <sup>†</sup>	-.36 <sup>†</sup>
Non-first year students	-.45**	-.42**	-.43**	-.38**
Morality	-.27**	-.38**	-.29**	-.34**
First year students	-.01	-.49*	-.25 <sup>†</sup>	-.19
Non-first year students	-.41**	-.36**	-.40**	-.42**
Spirituality	-.12	-.13	-.17*	-.17*
First year students	.03	-.33 <sup>†</sup>	-.16	-.07
Non-first year students	-.12	-.03	-.07	-.12



<u>Identity Uncertainty</u>	<u>Facet of Subjective Well-being</u>			
	Family satisfaction	Friend satisfaction	Satisfaction with school	Satisfaction with self
Friend support	-.32**	-.63**	-.34**	-.43**
First year students	-.16	-.40 <sup>†</sup>	-.20 <sup>†</sup>	-.22 <sup>†</sup>
Non-first year students	-.40**	-.77**	-.39**	-.52**
Communication competence	-.22**	-.31**	-.25**	-.31**
First year students	.10	-.26 <sup>†</sup>	.01	.01
Non-first year students	-.36**	-.35**	-.29*	-.34*
Sexuality	-.11	-.28**	-.14	-.26**
First year students	-.20 <sup>†</sup>	-.37 <sup>†</sup>	-.21 <sup>†</sup>	-.31 <sup>†</sup>
Non-first year students	-.01	-.31*	-.01	-.15
Ethnicity	-.10	-.20*	-.10	-.15
First year students	.06	-.35 <sup>†</sup>	-.13	-.09
Non-first year students	-.07	-.21 <sup>†</sup>	-.03	.00
Physical shape	-.11	-.20*	-.08	-.18*
First year students	-.11	-.35 <sup>†</sup>	-.08	-.10
Non-first year students	.04	-.11	-.09	-.08
<u>Final Survey</u>				
Others' approval	-.27**	-.33**	-.18	-.34**
First year students	-.51**	-.60**	-.40*	-.49**
Non-first year students	-.22 <sup>†</sup>	-.40**	-.24 <sup>†</sup>	-.35**

<u>Identity Uncertainty</u>	<u>Facet of Subjective Well-being</u>			
	Family satisfaction	Friend satisfaction	Satisfaction with school	Satisfaction with self
Appearance	-.13	-.20*	-.13	-.28**
First year students	-.25 <sup>†</sup>	-.39*	-.41*	-.33 <sup>†</sup>
Non-first year students	-.10	-.24 <sup>†</sup>	-.11	-.32*
Competitiveness	-.25**	-.16	-.16	-.25*
First year students	-.42**	-.48**	-.46**	-.42*
Non-first year students	-.19	-.10	-.13	-.22 <sup>†</sup>
Academic competence	-.26**	-.16	-.16	-.25*
First year students	-.35*	-.38*	-.31 <sup>†</sup>	-.23 <sup>†</sup>
Non-first year students	-.29*	-.10	-.34**	-.20 <sup>†</sup>
Family support	-.39**	-.20*	-.23*	-.27**
First year students	-.38*	-.35*	-.33 <sup>†</sup>	-.32 <sup>†</sup>
Non-first year students	-.48**	-.19	-.34**	-.30*
Morality	-.19*	-.14	-.22*	-.21*
First year students	-.31 <sup>†</sup>	-.42*	-.35*	-.31 <sup>†</sup>
Non-first year students	-.21 <sup>†</sup>	-.16	-.34**	-.24 <sup>†</sup>
Spirituality	-.08	-.16	.01	-.07
First year students	-.40*	-.43*	-.18	-.17
Non-first year students	.10	-.08	-.03	.01

<u>Identity Uncertainty</u>	<u>Facet of Subjective Well-being</u>			
	Family satisfaction	Friend satisfaction	Satisfaction with school	Satisfaction with self
Friend support	-.23*	-.30**	-.14	-.25**
First year students	-.42*	-.53**	-.30 <sup>†</sup>	-.34**
Non-first year students	-.21 <sup>†</sup>	-.37**	-.25 <sup>†</sup>	-.27*
Communication competence	-.21*	-.26**	-.20*	-.22*
First year students	-.34 <sup>†</sup>	-.45**	-.39*	-.34*
Non-first year students	-.14	-.26 <sup>†</sup>	-.17	-.22 <sup>†</sup>
Sexuality	-.17	-.18	-.15	-.18
First year students	-.30 <sup>†</sup>	-.29 <sup>†</sup>	-.31 <sup>†</sup>	-.27 <sup>†</sup>
Non-first year students	-.11	-.21 <sup>†</sup>	-.18	-.19
Ethnicity	-.25**	-.17	-.13	-.19
First year students	-.45**	-.39*	-.43*	-.25 <sup>†</sup>
Non-first year students	-.17	-.08	-.06	-.20 <sup>†</sup>
Physical shape	-.23*	-.29*	-.24*	-.22*
First year students	-.37*	-.42*	-.37*	-.31 <sup>†</sup>
Non-first year students	-.20 <sup>†</sup>	-.25*	-.23 <sup>†</sup>	-.27*

*Note.*  $N = 45$ , initial survey;  $N = 140$ , second survey (40 first year students, 90 non-first year students);  $N = 108$ , final survey (37 first year students, 65 non-first year students).

<sup>†</sup>value is not statistically significant, but it meets or exceeds the critical value of  $\pm .20$ .

\* $p < .05$ , two-tailed. \*\* $p < .01$ , two-tailed.

Table 6.4

*The Regression of Subjective Well-being onto Identity Uncertainty and Contingencies of Self-worth, Initial Survey*

	<u>Facets of Identity</u>											
	Others' Approval	Appearance	Competitiveness	Academic Competence	Family Support	Moral-ity	Spiritual-ity	Friend Support	Communi-cation	Sexual-ity	Ethni-city	Physical Shape
<u>Step 1</u>												
R <sup>2</sup> Δ	.06	.05	.02	.03	.08	.12	.01	.15	.16	.06	.05	.06
Sex β	-0.02	-0.04	-0.03	0.04	0.05	0.04	0.01	-0.01	-0.05	0.00	0.00	0.02
CSW β	0.07	-0.03	-0.12	0.14	0.27	-0.24	-0.07	0.27	-0.37	0.03	0.21	-0.23
IU β	-0.23	-0.22	-0.18	-0.08	-0.07	-0.25	-0.10	-0.21	-0.24	-0.26	-0.04	-0.07
<u>Step 2</u>												
R <sup>2</sup> Δ	.21*	.11	.14	.20*	.12	.17*	.08	.12	.14	.02	.16	.22*
Sex*CSW β	-0.27	0.61	0.11	-0.11	-0.29	-0.17	0.30	-0.28	0.25	0.03	-0.53	1.42
Sex*IU β	1.54**	1.72	1.95	1.29*	1.03	1.54**	0.25	1.41	0.31	0.51	1.93	0.38
CSW*IU β	1.22	-0.57	-0.06	0.15	-0.85	0.25	1.33	0.76	2.54	-0.62	0.13	3.24*
<u>Step 3</u>												
R <sup>2</sup> Δ	.05	.01	.06	.00	.00	.00	.00	.04	.02	.01	.07	.00
Sex*CSW*IU β	3.57	3.13	4.82	0.93	1.40	0.28	0.13	4.25	4.45	-2.61	4.16	0.32

*Note.*  $N = 45$ . CSW is an acronym for contingencies of self-worth. IU is an acronym for identity uncertainty. In each analysis, the contingencies of self-worth variable focuses on the same facet of self as the identity uncertainty variable.

\*  $p < .05$ , \*\*  $p < .01$ .

Table 6.5

*The Regression of Subjective Well-being onto Identity Uncertainty and Contingencies of Self-worth, Second Survey*

	<u>Facets of Identity</u>											
	Others' Approval	Appearance	Competitiveness	Academic Competence	Family Support	Morality	Spirituality	Friend Support	Communication	Sexuality	Ethnicity	Physical Shape
<u>Step 1</u>												
R <sup>2</sup> Δ	.30*	.10*	.13*	.31*	.32*	.19*	.07	.33*	.22*	.11*	.09*	.09*
Sex	0.19*	0.16	0.18*	0.12	0.02	0.15	0.20	0.11	0.19*	0.22*	0.18*	0.19*
Year	0.01	0.08	0.07	0.05	-0.03	0.07	0.12	-0.02	0.06	0.10	0.10	0.09
CSW	-0.02	0.09	0.17	0.30**	0.34**	-0.08	0.04	0.14	-0.29**	-0.06	0.09	-0.15
IU	-0.51**	-0.22*	-0.20*	-0.40**	-0.32**	-0.40**	-0.16	-0.50**	-0.27**	-0.25**	-0.18*	-0.11
<u>Step 2</u>												
R <sup>2</sup> Δ	.30*	.08	.05	.02	.14*	.08	.05	.14*	.10*	.04	.03	.05
Sex*CSW	-0.06	0.23	0.30	0.16	0.05	-0.10	-0.34	0.12	-0.50	-0.13	-0.05	0.15
Sex*IU	-0.08	0.57	0.56	0.31	-0.25	0.66	-0.12	0.00	0.58*	0.37	-0.11	0.31
Sex*Year	-0.10	-0.08	-0.08	-0.07	0.01	0.03	0.01	-0.11	0.04	-0.09	-0.05	-0.13
Year*CSW	0.03	0.02	0.15	0.25	-0.15	-0.04	0.58	0.27	-0.09	-0.52	0.02	-1.11
Year*IU	-0.74**	-0.66	-0.34	-0.24	-0.27	-0.64	0.29	-0.61**	-0.79*	-0.28	-0.41	-0.30
CSW*IU	-0.98**	0.55	-0.11	0.07	-1.36**	0.04	0.32	-1.01**	-1.05	0.89	0.18	0.30

Facets of Identity

	Others' Approval	Appearance	Competitiveness	Academic Competence	Family Support	Morality	Spirituality	Friend Support	Communication	Sexuality	Ethnicity	Physical Shape
<u>Step 3</u>												
R <sup>2</sup> Δ	.03	.04	.00	.04	.03	.01	.03	.03	.03	.02	.05	.03
Sex*Year*CSW	-0.25	-1.29	-0.11	-2.57	-1.66	0.62	-1.97	-1.91	1.02	-1.70	-1.48	1.77
Sex*Year*IU	-0.76	-0.69	-0.29	0.15	-0.39	-0.66	-0.11	0.27	-0.89	-0.16	-0.02	-0.63
Sex*CSW*IU	-1.30	-1.55	0.36	-0.15	-1.15	0.49	-1.55	0.04	1.45	0.99	-1.03	-0.77
<u>Step 4</u>												
R <sup>2</sup> Δ	.04	.05*	.00	.01	.00	.00	.04	.00	.00	.01	.01*	.01
Sex*Year*CSW*IU	0.96	2.60*	0.38	1.31	-2.17	0.71	1.48	0.49	-0.05	-0.11	1.60*	-3.44

---

*Note.*  $N = 140$ . CSW is an acronym for contingencies of self-worth. IU is an acronym for identity uncertainty. In each analysis, the contingencies of self-worth variable focuses on the same facet of self as the identity uncertainty variable.

\*  $p < .05$ , \*\*  $p < .01$ .

Table 6.6

*The Regression of Subjective Well-being onto Identity Uncertainty and Contingencies of Self-worth, Final Survey*

	<u>Facets of Identity</u>											
	Others' Approval	Appearance	Competitiveness	Academic Competence	Family Support	Morality	Spirituality	Friend Support	Communication	Sexuality	Ethnicity	Physical Shape
<u>Step 1</u>												
R <sup>2</sup> Δ	.24**	.23*	.20*	.28*	.34**	.19*	.06	.30*	.27*	.12*	.15*	.28*
Sex	0.20	0.16	0.20	0.12	0.04	0.16	0.21	0.14	0.17	0.23*	0.25*	0.16
Year	0.06	0.11	0.06	0.03	0.03	0.03	0.09	0.03	0.10	0.05	0.10	0.04
CSW	-0.02	0.27*	0.20	0.40**	0.41**	0.22*	-0.01	0.36**	-0.39**	-0.13	0.17	-0.36**
IU	-0.43**	-0.29**	-0.30**	-0.22*	-0.31**	-0.30**	-0.12	-0.30**	-0.22*	-0.24*	-0.23*	-0.26**
<u>Step 2</u>												
R <sup>2</sup> Δ	.05	.07	.05	.06	.07	.07	.06	.02	.07	.07	.11*	.13*
Sex*CSW	-0.40	-1.41	-0.71	0.16	-0.59	-0.06	-0.35	-0.31	0.18	-1.11	0.06	0.35
Sex*IU	0.24	-0.82	-0.08	0.31	-0.43	0.55	0.43	0.20	0.83*	0.27	-0.14	0.54
Sex*Year	-0.25	-0.52	-0.12	-0.07	0.03	-0.14	-0.02	-0.06	-0.07	-0.34	-0.19	-0.21
Year*CSW	-0.21	0.35	-0.21	0.25	0.07	-0.21	0.51	-0.35	0.04	-0.72	0.16	-0.39
Year*IU	-0.23	-0.05	-0.34	-0.24	0.04	-0.15	-0.51	-0.02	-0.03	-0.04	-0.11	0.56
CSW*IU	0.83	-1.52	-0.13	0.07	-0.71	-1.16*	0.08	-0.30	1.48*	0.79	-1.27**	2.11**

Facets of Identity

	Others' Approval	Appearance	Competitiveness	Academic Competence	Family Support	Morality	Spirituality	Friend Support	Communication	Sexuality	Ethnicity	Physical Shape
<u>Step 3</u>												
R <sup>2</sup> Δ	.01	.01	.07	.01	.04	.09	.03	.07	.07	.05	.06	.05
Sex*Year*CSW	0.31	-0.28	-1.96	-0.16	-2.11	-1.97	-1.96	1.60	0.67	0.41	-1.79	-2.34
Sex*Year*IU	0.48	0.25	-0.11	-0.19	0.49	-1.69	-0.46	0.54	-0.49	1.42	1.56	-0.24
Sex*CSW*IU	-1.00	-1.34	0.76	1.97	1.14	1.47	0.28	2.87	1.45	2.68	-1.00	-2.78
<u>Step 4</u>												
R <sup>2</sup> Δ	.00	.00	.02	.00	.01	.01	.01	.00	.00	.00	.03	.01
Sex*Year*CSW*IU	-0.06	0.68	-1.27	0.36	-0.86	0.72	-0.79	0.40	0.10	0.21	0.87	-1.73

---

*Note.*  $N = 108$ . CSW is an acronym for contingencies of self-worth. IU is an acronym for identity uncertainty. In each analysis, the contingencies of self-worth variable focuses on the same facet of self as the identity uncertainty variable.

\*  $p < .05$ , \*\*  $p < .01$ .



Table 6.7

*Slopes for the Regression of Subjective Well-being on Identity Uncertainty - Appearance, as Moderated by Contingencies of Self-worth – Appearance, Sex, and Year in School*

---

	First Year Students		Non-first Year Students	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
<u>CSW: Appearance</u>				
Low	-.12*	-.27	-.15**	-.32*
Average	-.14**	-.31	-.16**	-.36*
High	-.16**	-.34*	-.18**	-.43**

---

*Note.*  $N = 140$ . CSW is an acronym for contingencies of self-worth. Cell entries are slopes.

\* $p < .05$ , \*\* $p < .01$ .

Table 6.8

*Slopes for the Regression of Subjective Well-being on Identity Uncertainty - Ethnicity, as Moderated by Contingencies of Self-worth – Ethnicity, Sex, and Year in School*

---

<u>CSW: Ethnicity</u>	First Year Students		Non-first Year Students	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
Low	-0.01	-0.01	-0.19	-0.14
Average	-0.09	-0.05	-0.43*	-0.23
High	-0.12	-0.09	-0.44*	-0.32

---

*Note.*  $N = 140$ . CSW is an acronym for contingencies of self-worth. Cell entries are slopes.

\* $p < .05$ , \*\* $p < .01$ .

Table 6.9

*Hierarchical Linear Modeling Results Predicting Subjective Well-being from Identity Uncertainty, Contingencies of Self-worth,*

*Participant Sex, and Year in School*

	Others' Approval	Appearance	Competitiveness	Academic Competence	Family Support	Morality	Spirituality	Friend Support	Communication	Sexuality	Ethnicity	Physical Shape
Intercept	2.48**	2.04**	2.10**	1.82**	1.84**	1.88**	1.95**	2.51**	1.85**	2.10**	2.08**	2.00**
Time	0.04	0.06	0.06	0.07*	0.07*	0.06	0.06	0.03	0.06	0.05	0.05	0.06
Identity Uncertainty	-0.17**	-0.09*	-0.14**	-0.13**	-0.15**	-0.05*	-0.06*	-0.25**	0.28**	-0.03	-0.12**	0.05
Participant sex	0.03*	0.04*	0.02	0.02	0.00	0.02	0.02	0.02	0.01	0.03*	0.03*	0.02
Year in school	0.01	0.02	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.01	0.00
CSW	0.00	0.00	-0.03*	-0.05**	-0.07**	0.00	0.00	-0.06**	-0.07**	-0.02	0.03*	-0.02

*Note.* Cell entries are model coefficients. CSW is an acronym for Contingencies of Self-worth.

\* $p < .05$ , \*\*  $p < .01$ .

Table 6.10

*Correlations between Identity Uncertainty and Willingness to Self-Disclose, Composite*

*Scores*

---

	<u>Willingness to Self-disclose</u>
<u>Identity Uncertainty</u>	
Initial Survey	-.34**
Second Survey	-.24**
Final Survey	-.07

---

*Note.*  $N = 45$ , initial survey;  $N = 140$ , second survey;  $N = 108$ , final survey.

\*\* $p < .01$ .

Table 6.11

Correlations between Facets of Identity Uncertainty and Willingness to Self-disclose

	<u>Willingness to Self-disclosure</u>
Identity Uncertainty	
<u>Initial Survey</u>	
Others' Approval	-.44**
Appearance	-.05
Competitiveness	-.18
Academic Competence	-.19
Family Support	-.38**
Morality	-.48**
Spirituality	-.29*
Friend Support	-.39**
Communication Competence	-.42**
Sexuality	-.34*
Ethnicity	-.05
Physical Shape	-.23 <sup>†</sup>
<u>Second Survey</u>	
Others' Approval	-.32**
First year students	-.28 <sup>†</sup>
Non first year students	-.32**

Willingness to Self-discloseIdentity Uncertainty

Appearance	-0.10
First year students	-0.11
Non first year students	-0.07
Competitiveness	-0.13
First year students	-0.23 <sup>†</sup>
Non first year students	-0.08
Academic Competence	-0.20*
First year students	-0.26 <sup>†</sup>
Non first year students	-0.19
Family Support	-0.22**
First year students	-0.23 <sup>†</sup>
Non first year students	-0.21*
Morality	-0.31**
First year students	-0.23 <sup>†</sup>
Non first year students	-0.34**
Spirituality	-0.19*
First year students	-0.04
Non first year students	-0.22*

Willingness to Self-discloseIdentity Uncertainty

Friend Support	-0.32**
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First year students	-0.29 <sup>†</sup>
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Non first year students	-0.30**
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Communication Competence	-0.25**
--------------------------	---------

First year students	-0.27 <sup>†</sup>
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Non first year students	-0.26*
-------------------------	--------

Sexuality	-0.02
-----------	-------

First year students	.03
---------------------	-----

Non first year students	-0.02
-------------------------	-------

Ethnicity	-0.05
-----------	-------

First year students	-0.02
---------------------	-------

Non first year students	-0.04
-------------------------	-------

Physical Shape	-0.06
----------------	-------

First year students	-0.08
---------------------	-------

Non first year students	-0.02
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Final Survey

Others' Approval	-0.12
------------------	-------

First year students	-0.16
---------------------	-------

Non first year students	-0.21 <sup>†</sup>
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Willingness to Self-discloseIdentity Uncertainty

Appearance	-0.06
First year students	-0.15
Non first year students	-0.07
Competitiveness	.05
First year students	-0.09
Non first year students	.08
Academic Competence	.01
First year students	-0.09
Non first year students	-0.03
Family Support	-0.04
First year students	-0.02
Non first year students	-0.15
Morality	-0.02
First year students	-0.05
Non first year students	-0.12
Spirituality	-0.16
First year students	-0.14
Non first year students	-0.17



Willingness to Self-discloseIdentity Uncertainty

Friend Support	-0.17
First year students	-0.25 <sup>†</sup>
Non first year students	-0.24 <sup>†</sup>
Communication Competence	-0.12
First year students	-0.23 <sup>†</sup>
Non first year students	-0.15
Sexuality	.01
First year students	.08
Non first year students	-0.14
Ethnicity	-0.10
First year students	-0.20 <sup>†</sup>
Non first year students	-0.07
Physical Shape	-0.04
First year students	-0.10
Non first year students	-0.09

---

*Note.*  $N = 45$ , initial survey;  $N = 140$ , second survey;  $N = 108$ , final survey.

<sup>†</sup>value is not statistically significant, but it meet or exceeds the critical value of  $\pm 0.20$ .

\* $p < .05$ , \*\* $p < .01$ .

Table 6.12

*Hierarchical Linear Modeling Results Predicting Willingness to Self-disclose from*

*Identity Uncertainty, Tolerance for Uncertainty, and Participant Sex*

---

Intercept	1.91**
Time	-0.12*
Identity Uncertainty	-0.13
Participant Sex	-0.07**
Tolerance for Uncertainty	0.01

---

*Note.* Cell entries are model coefficients.

\* $p < .05$ , \*\*  $p < .01$ .

## CHAPTER 7

I opened this dissertation by noting that emerging adulthood, which coincides with the transition to college, is a period of time in which a person's identity undergoes substantial change (Arnett, 2000). Research indicates that as people experience changes in their identity, they may become aggravated (Erikson, 1968), and for college students specifically, a person's identity is related to their satisfaction with the college experience (Lounsbury et al., 2004). During this period of time, emerging adults experience various changes and negotiate new identities to adapt to their novel circumstances. This process can cause discomfort and confusion, creating negative consequences for an emerging adult's subjective well-being.

This dissertation also drew upon the fact that communication plays an integral role in the identity process (Hecht, 1993). People develop their identities through group membership and relationships with others. Through interactions with others, identities are enacted and verified. People are able to construct their self-concept based on the verification and identity support they receive from their relational partners. Thus, communication helps to create, maintain, and reveal identities within relationships.

Central to this project is the concept *identity uncertainty*. Identity uncertainty is defined as the extent to which people are unsure about the qualities that they possess. Although identity uncertainty is implied within theories of identity development, the conceptualization of identity uncertainty as a phenomenon that ebbs and flows over the course of a person's life is a unique contribution of this dissertation. Moreover, identity uncertainty provides a construct that intersects with both the challenges of emerging adulthood and communication of identity.

The findings of this dissertation confirm identity uncertainty as a measurable construct and reveal the ways in which identity uncertainty is related to subjective well-being and willingness to self-disclose among first year and non-first year college students. To assess the impact that identity uncertainty has on subjective well-being, and how communication may affect identity uncertainty during the transition to college, I conducted two longitudinal studies. The pilot study was conducted during the course of the Fall 2007 semester and included first year students. The main study was conducted during the course of the Fall 2008 semester and included both first year and non-first year students. In both studies, I explored the relationship between identity uncertainty and subjective well-being and how the importance of an identity affects subjective well-being. In the main study, I also investigated the relationship between identity uncertainty, tolerance for uncertainty, and self-disclosure. In the following sections, I review the implications of the results of these studies, and I discuss strengths, limitations, and directions for future research.

### Implications

Theories of identity have focused on the source of social and personal identities. Social identity theory suggests that a person's involvement within a social group affects his or her self-concept, and a person's social identity is developed and maintained through membership in social groups (Tajfel & Turner, 1986). Identity theory posits that people have multiple roles that they manage by establishing a hierarchy of roles and different levels of commitment to any given role (Stryker, 1987). The communication theory of identity suggests that through different frames of identity, communication both clarifies and creates discrepancies in a person's identity (Jung & Hecht, 2004). Theories

of identity development emphasize how a person forming a new identity may suffer from negative consequences (Arnett, 2000; Chickering, 1969; Erikson, 1968). A central goal of this dissertation was to contribute to the ongoing conversation about identity by exploring the experience of identity uncertainty.

### *Identity Uncertainty as a Construct*

Theories about identity suggest that people's identities emerge and develop in various ways, and that people sometimes have discrepancies about their identities. Uncertainty about identity is implicitly linked to areas of study about identity, but this dissertation is the first project to explicate identity uncertainty as a phenomenon. Communication scholars have explored uncertainty and many contexts in which it exists. In some of these contexts, self uncertainty arises, but scholars have not considered uncertainty about identity explicitly, even though they suggest that self-doubts and questions about personal motives are essential to understanding uncertainty. Uncertainty can cause discomfort, and therefore, people are motivated to reduce it (Berger & Bradac, 1982). Combining these schools of thought lead me to create identity uncertainty as a construct.

The results of this study and the pilot study suggest that identity uncertainty is a phenomenon experienced by students during the transition to college. Based on the model fit indices in both the pilot and current studies, I believe that the measure of identity uncertainty provides a unidimensional assessment of uncertainty about various facets of identity. I also observed a tendency for first year students to experience more uncertainty about facets of their identity, relative to non-first year students. Although only four of the twelve relevant tests were statistically significant, these patterns suggest that the

prevalence of identity uncertainty may be greater for students just beginning college. The creation and validation of this measure will allow me and other scholars to enhance our understanding of identity in general, and more specifically, the uncertainty that people experience during changes in their identity.

The concept of identity uncertainty may illuminate conditions under which identities change. Existing research on identity suggests that people make commitments to an identity (Stryker, 1968). Commitment is the degree to which the strength of a person's relationship depends on that person being committed to the particular role identity under which that relationship exists. Commitment is thus measured by "the 'costs' of giving up meaningful relations to others should alternative courses of action be pursued" (Stryker, 1968, p. 560). If people feel uncertain about an aspect of who they are, they may be more likely to dissolve that particular identity. In this sense, identity uncertainty may be a requisite for new identities.

Similarly, identity uncertainty may contribute to understanding identity salience. Identity salience is the likelihood that an identity will be invoked in any given situation (Stryker, 1987). When an individual experiences uncertainty about an identity, that identity may become less salient. Because salient identities are associated with a person's feelings of self-worth and psychological subjective well-being (Callero, 1985; Reitzes & Mutran, 2004; Thoits, 1991) and can influence people's interpersonal relationships (Callero, 1985), recognizing uncertain identities could point to strategies for improving personal and relational health.

The construct of uncertainty has been explored in various contexts and types of relationships. Considering identity uncertainty in these same contexts may provide a

more complete understanding of why uncertainty arises in those situations. For example, relational uncertainty may occur because an individual experiences identity uncertainty, and relational uncertainty may be alleviated if an individual's identity uncertainty is mitigated. Within the health context, people experience illness uncertainty (Babrow et al., 1998; Sheer & Clive, 1995), relational uncertainty, medical setting uncertainty (Sheer & Clive, 1995), patient-clinician uncertainty, and healthcare delivery uncertainty (Begon & Kaissi, 2005). When people become ill, they may become weak or unable to perform tasks that they were once able to. These changes may lead a person to question who they are now that they are no longer physically fit, now that they are unable to perform the duties associated with their social roles, or now that they are no longer able to live independently. Thus identity uncertainty may contribute to other types of uncertainty that people experience within other contexts.

#### *Identity Uncertainty and Subjective Well-being*

The results of both the pilot study and this study suggest that identity uncertainty negatively affects subjective well-being, particularly when specific facets of identity are important to the self. The correlations between the composite scores for identity uncertainty and subjective well-being were negative and significant. More specifically, over the course of all three surveys in the main study, identity uncertainty about others' approval, academic competence, family support, morality, friend support, communication competence, and physical shape were negatively related to family satisfaction, friend satisfaction, satisfaction with school, and satisfaction with the self. Identity uncertainty about competitiveness and ethnicity were negatively correlated with family satisfaction, friend satisfaction, and satisfaction about the self. Identity uncertainty about appearance

was negatively associated with friend satisfaction, satisfaction with school, and satisfaction with the self. Identity uncertainty about sexuality was negatively related to friend satisfaction and satisfaction with the self. By the final survey, identity uncertainty about communication competence and ethnicity were related to subjective well-being.

These findings align with previous research on identity. Identities emerge and change over time (Arnett, 2000; Chickering, 1969), and these changes may cause stress (Stryker & Serpe, 1982; Thoits, 1991), discomfort (Erikson, 1968), and confusion (Arnett, 2000). More specifically, Lounsbury and colleagues found that ambiguity about an identity is negatively associated with different areas of the college experience (Lounsbury et al., 2004; Lounsbury et al., 2005). Furthermore, research on contingencies of self-worth suggests that people may experience negative consequences when facets of the self are threatened (Sargent et al., 2006).

Some facets of the self may be more important to the self than others. Results from this study indicate that during the transition to college, identity uncertainty about others' approval, appearance, competitiveness, academic competence, family support, friend support, morality, ethnicity, and physical shape have a greater impact on subjective well-being when these facets are important to the self. I consider these specific findings more closely in the sections that follow.

*Others' approval.* Previous research suggests that others' approval predicted increases in depressive symptoms during the first semester of college (Sargent et al., 2006). During the transition to college, students begin to differentiate from their parents and may suffer from balancing the need for their parents' approval and their own independence (Bios, 1979). Because peers are the most salient social referents in the



college environment (Perkins, 1997), gaining a friend's approval may be important to a person's sense of self. For those individuals who rely on others' approval for self-worth, uncertainty about this approval is especially problematic.

*Appearance.* Prior research on contingencies of self-worth suggests that for college students, appearance is associated with stress, aggression, drug and alcohol use, and symptoms of eating disorders (Crocker, 2002). During the transition to college and emerging adulthood, people begin to develop serious romantic relationships (Arnett, 2000; Padgham & Blyth, 1991). Because of this desire to develop romantic relationships, appearance may be a salient facet of identity. There is a considerable amount of research indicating the negative effects of poor body image attitudes for adolescents and young adults (see Grogan, 2007). The results of this project suggest that self-doubts about appearance is particularly hard on people who tie their self-worth to their looks.

*Competitiveness.* Results suggested a negative association between identity uncertainty about competitiveness and subjective well-being that is greatest for people who value being competitive. Because students may struggle with the pressure to succeed academically during the transition to college (Pascarella & Terenzini, 2005), competitiveness may be especially salient to them. People who were "A students" in high school might feel uncertainty about how they compare to other students at the university level. The desire to succeed or "beat" other people may also arise in creating a new social network. Students who are not accustomed to being competitive may feel uncertain during the transition to college; if they care about their competitiveness, these questions can undermine subjective well-being.

*Academic competence.* People who were “A students” in high school might also worry about how they will perform at the university level, thus experiencing uncertainty about their academic competence. Sargent et al. (2006) found that academics were related to depressive symptoms for first year college students. Students who are unsure about their academic competence may worry about disappointing their parents, losing a scholarship, or lowering their grade point average. Moreover, this dissertation suggests that these worries are more troublesome to young adults who link their self-worth to academic competence.

*Family support.* The transition to college represents a first time away from home and family for some students. This transition, along with emerging adults’ new interests, abilities, and behaviors may impact the family system (Aquilino, 2006). Research suggests that students living away from home report more affection, communication, satisfaction, and independence in relation to parents after moving away from home (Sullivan & Sullivan, 1980), which may prompt changes in a student’s family identity. For young adults whose self-worth depends on family support, doubts in this arena are especially troubling.

*Friend support.* Friend support is another area in which people may experience uncertainty, especially during the transition to college. Young adults who lack friends suffer from emotional maladjustment (Waldo & Fuhrman, 1981), develop more physical symptoms (Moos & VanDort, 1976), and have lower grade point averages (Pace, 1970) than young adults who have friends. If people are unsure about whether their friends like them, they may suffer from these negative consequences of not having friends. Friends also provide support (Rawlins, 1989) and are dependable (Tesch & Martin, 1983). When

people experience uncertainty about their friends, they may no longer receive support. Research on cliques suggests that for late adolescents, friends can provide support and at other times ridicule and ostracize each other (Adler & Adler, 1995). Interestingly, identity uncertainty about friend support has a greater impact on subjective well-being for non-first year students than first year students. During the transition to college, first year students may rely more on their friends from home, which are most likely stable relationships.

*Morality.* Because emerging adults question their worldview (Perry, 1999), they may experience uncertainty about their morality. The theory of moral judgment development suggests that as people transition through adolescence into adulthood, their moral judgments change from concerns with obedience, punishment avoidance, and instrumental needs to concerns about role obligations, interpersonal needs, and respect for social rules and authority to concerns with mutual respect, contractual arrangements among individuals and their rights and duties, and differentiated concepts of justice and rights (Colby & Kohlberg, 1987; Kohlberg, 1984). People are exposed to a new lifestyle upon entering college and may behave in ways that are inconsistent with how they were raised. Emerging adults engage in risky behaviors more easily than adolescents because of the lack of parental supervision and fewer role constraints (Arnett, 2000), which may threaten their sense of morality. When a person's self-worth depends on their morality, doubts are more likely to degrade subjective well-being.

*Ethnicity.* Changes in worldview may also cause some college students to experience identity uncertainty about ethnicity. Often, worldview is closely tied to ethnicity. Therefore, if a student is questioning their world view, they may also question

how their ethnicity affects their life. Additionally, students from an ethnic minority may feel that college has a “chilly climate” towards the ethnic minority, which can negatively impact their academic success (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999). When ethnicity is important to the self, this uncertainty has a more negative effect on subjective well-being.

*Physical shape.* The transition to college is often associated with the “Freshman 15,” a myth that assumes students will gain 15 pounds during their first year of college. Research suggest that freshmen who are concerned about gaining weight are more likely to think about their weight, have a more negative body image than others, and consider themselves overweight (Graham & Jones, 2002). According to the CDC (1997), approximately 20% of college students are overweight. These weight issues, combined with issues about physical appearance in general, may be detrimental to a student’s subjective well-being, especially if a person’s self-worth is linked to their physical shape.

In total, these findings suggest that identity uncertainty is negatively related to subjective well-being, and that these associations are stronger if people have doubts about facets of identity that are important to self-worth. These results imply that identity uncertainty may be related to depression or other mental health problems experienced by college students. Moreover, the associations documented in this dissertation point to the utility of examining the negative consequences of identity uncertainty under other circumstances and in other contexts.

#### *Identity Uncertainty and Communication*

This project was also designed to illuminate how communication affects identity uncertainty. URT suggests that people are motivated to reduce uncertainty (Berger &

Bradac, 1982). Based on this assumption, I expected people to be motivated to reduce uncertainty about their identity. The communication theory of identity posits that identities can develop or emerge through communication (Jung & Hecht, 2004). Taken together, I anticipated that people who were experiencing identity uncertainty would be motivated to reduce that uncertainty by communicating with others about that identity.

To measure how communication affects identity uncertainty, I conducted a diary-like survey in which participants were asked to recall a conversation they had that was relevant to a facet of their identity. In addition to describing the conversation, participants were asked to indicate whether the conversation was positive or negative, and whether it confirmed their identity. Most of the participants reported that they had not had a conversation about their identity. On the surface, it appears as though people did not talk about issues related to their identity. Although speculative, I wonder if conversations about a person's identity are below the level of conscious experience. These conversations may be so pervasive, that people do not realize they are communicating about issues related to their identity. Identity is enacted through communication (Hecht, 1993) and people simultaneously receive feedback about an identity from others (Stryker, 1987), which suggests that identity negotiation is an ongoing and constant process. The nature of identity, then, may inhibit memories for specific conversations about identity.

In the absence of measures of experienced communication about identity, I used a measure of willingness to self-disclose to test my hypotheses. Perhaps not surprisingly, results from this study suggest that there is a negative relationship between identity uncertainty and willingness to self-disclose. More specifically, identity uncertainty about others' approval, academic competence, family support, morality, spirituality, friend

support, communication competence, sexuality and physical shape were negatively correlated with willingness to self-disclose across the initial and second survey. Although the hypothesis was not supported, this negative association sheds light on an interesting aspect of communication and identity uncertainty. Rather than identity uncertainty driving willingness to self-disclose, it is possible that the more self-disclosive people are, the less identity uncertainty they experience. If a person is dispositionally willing to talk about him or herself, he or she might create more conversations that might subconsciously mitigate or preempt identity uncertainty.

On the other hand, the negative association between willingness to self-disclose and identity uncertainty could reflect a tendency for people with self doubts to refrain from discussing issues related to identity uncertainty. One reason people may avoid discussing their uncertainty is reticence. Stryker and Serpe (1982) discovered that when people experiment with their identities, they may encounter invalidation from other people. If people experience invalidation of an identity, they may be less likely to want to discuss issues pertaining to their identity. Arnett (2000) argued that emerging adults struggling with changes in identity may experience depression, and younger people who are depressed may withdraw from social interactions (Kovacs, Feinberg, Crouse-Novak, Paulauskas, & Finklestein, 1984). Also, some people prefer uncertainty (Brashers, 2001), and therefore may not feel the need to self-disclose.

Avoiding communication about identity uncertainty may also be strategic. People negotiate the costs and rewards to self-disclosing (Altman & Taylor, 1973) and may decide that revealing their feelings of uncertainty can pose a threat to their face (Afifi & Guerrero, 1998; Baxter & Wilmot, 1985). Similarly, people may struggle with the

openness-closedness dialectic (Baxter & Montgomery, 1996) and choose not to self-disclose. Following theories on managing private information (Petronio, 2000), identity uncertainty might be considered too private to discuss with others. Just as relational uncertainty is positively associated with topic avoidance (Knobloch & Carpenter-Theune, 2004; Planalp, Rutherford, & Honeycutt, 1988), identity uncertainty may prompt people to strategically avoid a difficult topic.

Relational uncertainty is also positively associated with indirect communication about irritations in a relationship (Theiss & Solomon, 2006), suggesting that some people use indirect communication strategies when experiencing uncertainty. Extending this finding to identity uncertainty suggests that instead of having explicit conversations about identity uncertainty, people who experience identity uncertainty use indirect communication. Although speculative, this reasoning is consistent with my suggestion that identity relevant communication is too subtle to recall. Instead, as self-doubts emerge, people use more indirect communication experiences to build a sense of self. Only when self-conceptions are clear, might people disclose them to others.

I tested the effect of tolerance for uncertainty, but found that it did not have a significant impact on the association between identity uncertainty and willingness to self-disclose. Specifically, results indicated that there was a negative relationship between identity uncertainty and willingness to self-disclose, but that tolerance for uncertainty did not have an affect on that relationship. These results suggest that social normative concerns may be more relevant to communication about identity than individual comfort levels. Even though some people are less tolerant of uncertainty than others, their

tolerance does not appear to affect whether they communicate about the uncertainty they are experiencing.

### *The Transition to College*

Beyond the theoretical contributions of this dissertation, the results also have practical implications for the understanding of subjective well-being of college students. The transition to college can be a tumultuous period of time for some people, especially when they experience threats to their identity. The research conducted in this dissertation has practical implications for mitigating the negative effects of experiencing identity uncertainty during the transition to college.

First year students and non-first year students both experience identity uncertainty, and the experience negatively affects their subjective well-being. For both groups, I observed a negative association between identity uncertainty and willingness to self-disclose. First year and non-first year students share many of the same associations between facets of identity uncertainty and subjective well-being, and identity uncertainty and the willingness to self-disclose, but there are also some differences. Results showed associations for first year students between identity uncertainty about others' approval, competitiveness, academic competence, family support, morality, friend support, and communication competence and willingness to self-disclose. For non-first year students, identity uncertainty about others' approval, family support, morality, spirituality, friend support, and communication competence were correlated with willingness to self-disclose. In terms of subjective well-being, for first year students, identity uncertainty about competitiveness, spirituality, and ethnicity were negatively associated with subjective well-being for the final survey.



By the end of the semester, competitiveness might be heightened for first year students hoping to finish their coursework with acceptable grades. They might also be taking coursework necessary to enter into a major program. If they do not perform well in these courses, they might not be accepted into the major. Non-first year students may already have an idea of the types of grades they earn and might have been accepted into a major, and therefore do not feel as competitive to earn better grades. For first year students, a lack of willingness to self-disclose about identity uncertainty related to competitiveness might be due to the fact that they do not want to seem unintelligent to their peers, especially when competing to gain admittance into a major. This may also explain why, for first year students, identity uncertainty about academic competence was negatively associated with willingness to self-disclose.

The nature of the facets of spirituality and ethnicity may require the full length of a semester for first year students to feel uncertainty about them. These facets might be tied to a person's worldview, which does not usually change in short periods of time. Non-first year students have had more time to challenge their own worldviews, but may not feel comfortable discussing identity issues related to spirituality. For non-first year students, identity uncertainty about spirituality was negatively correlated with willingness to self-disclose. Religion can be a taboo topic, which may cause people to refrain from talking about issues related to religion or spirituality.

In terms of subjective well-being, identity uncertainty was correlated with friend satisfaction for both first year students and non-first year students for the second survey. For the final survey, friend satisfaction was correlated with identity uncertainty for first year students, but this association was not as strong for non-first year students. During the

first semester of college, first year students may meet many new people and work toward establishing a network of close friends. Making new friends can be a difficult process, which may explain why first year students struggle with friend satisfaction more so than non-first year students. When first year students are experiencing identity uncertainty, they may not have friends to provide them support. Non-first year students have had time to establish a network of close friends, and therefore might not suffer as much.

In addition to the negative correlations between identity uncertainty and subjective well-being, results from regression analyses showed some differences between first year students and non-first year students. Specifically, identity uncertainty about others' approval and communication competence had a greater impact on subjective well-being for first year students than non-first year students. First year students are new to the college experience and may be seeking out approval from others more so than non-first students. In doing so, others' approval becomes salient to first year students and, therefore, uncertainty about it has a more negative affect on their subjective well-being than for non-first year students.

Communication competence may be important to first year students because they are navigating their way through their first semester of college and want to make a good first impression on instructors, classmates, roommates, and potential friends. Many first year students enroll in the public speaking course, so their sense of communication competence might be heightened. For these reasons, identity uncertainty about communication competence might have a more negative impact on subjective well-being when communication competence is important to the self for first year students than non-first year students.

Non-first year students reported a more negative association between identity uncertainty about friend support and subjective well-being when friend support was important to their sense of self than first year students. Because non-first year students may already have an established network of close friends, problems within those friendships might have a greater impact on their subjective well-being than for first year students who may not have established close relations yet.

Several sex-differences were also revealed across the three surveys. In general, spirituality was more important to the self for males than for females, and family support was more important to the self for females than males. Identity uncertainty about appearance and physical shape was higher for females than for males. More specifically, the association between identity uncertainty and subjective well-being was stronger for women when they experience uncertainty about others' approval, competitiveness, communication competence, sexuality, ethnicity, and physical shape. Additionally, when others' approval, academic competence, morality, and communication competence are important to the self, the association between identity uncertainty about these facets and subjective well-being was more negative for women than for men. Men and women both experience the negative affects of identity uncertainty on subjective well-being, but these associations highlight the ways in which particular facets of identity affect men and women differently.

Results indicated that in general, females were more willing to self-disclose than males, and males had a higher tolerance for uncertainty than females. Ample research suggests that women tend to self-disclose more than men (see Dindia & Allen, 1992).

Although not surprising, these results have implications for creating a smooth transition to college for new and returning students.

Taken together, these results suggest that, in general, identity uncertainty decreases and subjective well-being increases over the course of a semester. College and universities implement programs to assist first year students during the transition to college, but this research reveals that non-first year students also experience uncertainty. Results showed that a tendency to talk to others was related to a decrease in identity uncertainty. College students who are reticent or decide not self-disclose for other reasons may suffer more than those who are willing to disclose. Because men tend self-disclose less than women, university administrators should provide ways in which to encourage men to talk with others over the course of their college careers. If a reduction in identity uncertainty leads to an increase in subjective well-being, students should be encouraged to discuss the issues about identity that they are experiencing. Results from the pilot study suggest that talking about identity uncertainty decreases the negative effect of identity uncertainty on subjective well-being. Although speculative, these findings suggest that encouraging college students to communicate with others about the identity uncertainty that they experience can enhance their subjective well-being.

#### Strengths, Limitations, and Future Directions

The findings of this dissertation contribute to a greater understanding of how identity uncertainty affects college students, and the role that communication plays in identity uncertainty. These conclusions are contextualized by the strengths and limitations of the dissertation and they suggest directions for future research.

The results from this study suggest that identity uncertainty is a measurable construct, and that the identity uncertainty measure developed herein is a reliable and valid indicator of that construct. Given its infancy, future work using the measure would verify its reliability and validity. This measure has only been used with the college student population. Future work using other populations would increase its generalizability. Also, conducting tests of convergent and discriminant validity would solidify it as a well-designed measure. I am hopeful that the creation of this scale will lead to future research on identity uncertainty.

One limitation to the conclusions drawn stems from the fact that I had to revise my sampling efforts following the commencement of the study. Despite increasing the sampling frame and the cash prize, the sample size for the initial survey was only 46, and the overall response rate was only 15%. Recruitment problems may have been due to the fact that these students were beginning their college careers and feeling too overwhelmed to participate in a study. I also wonder if the 2008 Presidential election, which involved numerous polling efforts, dampened people's responsiveness to survey opportunities.

To obtain more participants, I recruited people through the university's public speaking course. By including these participants, I offset the selection bias if the sample had been comprised only of students who had volunteered to participate through my initial recruitment strategy. After recruiting from the public speaking course, the sample size for the second and final surveys increased to 140 and 108 respectively, but few participants completed all three portions of the study.

Additionally, there was a low turnout for participation in the online diary-like survey. I was not able to test several of my hypotheses because not enough people

participated in the diary-like survey. This limits my conclusions because I lost the ability to time order the communication data. Also, I was unable to determine the nature of the conversations the diary set out to explore.

To this point, identity uncertainty has only been studied within the context of the transition to college. This period of time, however, is only one transition in which people may experience identity uncertainty. Research suggests that people experience changes in identity during the transition to motherhood (Smith, 1999), career changes in later life (Bailey & Hansson, 1995), and in widowhood (DeGarmo & Kitson, 1996). Future research should include identity uncertainty and how communication affects identity uncertainty across changes in the lifespan. Identities continue to develop throughout life, so it is necessary to understand the effects of identity uncertainty during all life transitions.

Another way in which the study of identity uncertainty can be enhanced is through different methodologies. In this study, I used self-report measures because I examined a phenomenon that occurs at the intrapersonal level. An interaction study, alternatively, may reveal the types of things that people say during a conversation about a facet of identity, and how what is said affects the person experiencing the uncertainty. Observing a conversation about identity uncertainty in real time may answer questions about the role that communication plays in reducing or maintaining identity uncertainty. It might be difficult for people to identify instances in which their identity is being confirmed, so implementing procedures in which a person's identity is disconfirmed might provide means to instigate an explicit, identity-relevant conversation (e.g., Johnson, 2009).

In addition to using different methodologies, the study of identity uncertainty can be advanced by exploring the different communication partners people have when communicating about identity uncertainty. For example, people who experience uncertainty about their competitiveness as an athlete or student may prefer to talk to an authority figure such a coach or teacher, whereas people who experience uncertainty about others' approval or appearance may prefer to talk with a friend or family member. The results from this study indicate that family and friend support are important to college students. Exploring these relationships further may also shed light on who people communicate with when they experience identity uncertainty.

Finally, developing studies to assess the longer term consequences of identity uncertainty would provide insight in the role of self-doubts in a person's life course. To the extent that identity uncertainty undermines a student's subjective well-being, future research might document a relationship between identity uncertainty and school dropout or a person's grade point average over the course of their college career. A person's relational network development might also suffer when levels of identity uncertainty are high. Obtaining information about how identity uncertainty affects a person over a longer period of time is an important direction for further investigation.

### Conclusion

The focus of this dissertation was to explore how identity uncertainty intersects with personal subjective well-being and interpersonal communication. Results suggested that identity uncertainty was negatively associated with subjective well-being, and this association was more negative when particular facets of an identity were important to the person experiencing the uncertainty. With respect to the role of communication, the

results were inconsistent with my hypotheses; nonetheless, the findings shed light on the relationship between identity uncertainty and self-disclosure. In particular, the negative association between willingness to self-disclose and identity uncertainty may reveal the benefits of communication for identity development, and how identity uncertainty inhibits the kinds of interactions that can promote identity development. The findings contribute to both the theoretical understanding of identity uncertainty, as well as a practical understanding of identity uncertainty during the transition to college.



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