

Exploring the interaction among undergraduates' boundaries and the identity status and identity style constructs

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Dissertation submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of:

Doctor of Philosophy
In
Counselor Education

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March 29, 2012
Blacksburg, Virginia

Keywords: Identity, Identity formation, identity development, Identity structure, Boundaries

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ABSTRACT

This dissertation focuses on the process of identity development and the role of boundaries in that process. Toward this end a study was conducted to explore the interaction between Hartman's (1991) boundaries, Marcia's (1966) identity statuses, and Berzonsky's (1989) identity styles. Data for this study was collected via survey from a convenience sample of undergraduate college students (n = 549) between ages 18 and 24 and across 4 courses at a large state institution in rural Southeastern United States. A 2-way ANOVA was used in this study to explore differences in boundary scores for both Marcia's (1966) identity statuses and Berzonsky's (1989) identity styles. No significant main effect was found for identity status, and no interactional effect was found between identity status and identity style, but a significant main effect was found for identity style. Post-hoc analyses for identity style revealed the diffuse/avoidant style as significantly higher in boundary score than the informational style, which in turn was significantly higher in boundary score than the normative style, with higher boundary scores indicating thinner boundaries. A discussion of these results and their implications for counseling practice are provided.

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Chapter 1

Introduction

The focus of this study was on identity and the process through which individual's identities form. Specifically, this researcher explored the role of boundary structures in delineating identity. The field of identity research reaches back to the original works of Erik Erikson (1950, 1968). Erikson introduced identity as a major developmental construct within his psychosocial stages of development (1950). According to Erikson's stage theory, the developmental stage faced during adolescence is identity vs. role confusion (p. 261). This particular stage in the developmental sequence became a primary focus of Erikson's writings, laying the foundations of identity theory. His theory of identity is extensive and articulates a multidimensional description of the identity formation process. As profound as Erikson's work is, it has presented researchers with challenges for exploring the identity concept scientifically. Of many initial attempts to operationalize and measure Erikson's identity theory, James Marcia's (1966) identity status paradigm has been the most successful.

The identity status paradigm is Marcia's (1966) operationalization of four identity *statuses* drawn directly from Erikson's theory: Identity achievement, moratorium, identity foreclosure, and identity diffusion. According to this paradigm, a person's identity status is determined by two *dimensions*: The exploration of various identity options, and commitment within identity related arenas (or domains). The *domains* originally considered in Marcia's work include career, religious ideology, and political ideology. As measured within these domains, individuals who have not explored identity options and have made no commitments are considered to be in identity diffusion. Those who have not explored identity options but have made commitments within these domains are in identity foreclosure. Individuals currently

exploring identity options without having made commitments yet are in moratorium, and those who have explored identity options and then made commitments within these domains are in identity achievement. This identity status paradigm became the foundation of identity related research, though a clear developmental sequence for the identity formation process remained questionable.

Soon after Marcia's work, significant amounts of empirical support for the identity construct ensued. Subsequent research on identity theory has both expanded upon Marcia's original identity constructs, and has contributed new theories that compliment Marcia's work. Research expanding upon Marcia's original identity constructs has continued to operate within the identity status paradigm, while contributing further developments among the status (Archer & Waterman, 1990; Berzonsky, 1985; Henry & Renaud, 1972; Josselson, 1987), dimension (Luyckx, Goossens, Soenens, Beyers, & Vansteenkiste, 2005; Meeus, Iedema, & Maassen, 2002), and domain (Grotevant, Thorbecke, & Meyer, 1982; Rogow, Marcia, & Slugoski, 1983) constructs it is established upon. Those additional theories that compliment Marcia's work have tended to emphasize the developmental processes of identity formation.

Of the additional identity theories that compliment Marcia's status paradigm, three are organized according to their philosophical roots in a discovery and/or constructivist approach to identity formation (Berzonsky, 1989; Schwartz, 2002; Waterman, 1984), two are concerned with the identity formation process and how aspects of identity content interact during exploration (Grotevant, 1987; Kerpelman, Pittman, & Lamke, 1997a); and one is concerned with socio-environmental influences on identity formation (Côté, 1996, 1997). In combination with the identity status paradigm, these additional works have furnished a wealth of substantive content for a rich understanding of identity. With this substantive understanding of identity established, it

has been proposed by Kroger (2003a) that a focus on the structure of identity and how it evolves during the identity formation process has the greatest potential for advancing the field of identity research.

Problem

The need for a greater focus on the structure of identity was expressed by Jane Kroger in 2003(a). Kroger asserted that the field of identity research had grown considerably in terms of the content of identity, but that “differentiating structure from content [would] enable a more refined understanding of ego identity status transition” (p. 216). As expressed by both Kroger and van Hoof and Raaijmakers (2003), such an identity structure would regulate or filter an individual’s experiences in life, while providing the framework and structural support for the functioning of that identity. This clearly articulates the need for a structural understanding of identity; however, such a model is still yet to be established.

In response to Kroger’s call for contributions that focus on the structure of identity a structural theory of identity development is offered by this author. This perspective introduces the concept of a boundary that frames identity, and draws primarily from the identity status (Marcia, 1966), and style (Berzonsky, 1989) theories within identity literature. In addition to the primary role of the status and style theories in this model, a review of how each major identity theory informs this structural understanding is also articulated. Unique to this structural view is the boundary construct, which provides the framework of the theory itself. Before this study, the boundary construct had not been directly utilized in identity literature (as used for an individual), and its interactions with Marcia’s identity statuses and Berzonsky’s identity styles had not been examined.

Purpose

The purpose of this study was to examine boundary differences for the four identity statuses, and the three identity styles. Two of these constructs were identified from the identity literature: Marcia's (1966) identity *statuses* (identity diffusion, identity foreclosure, moratorium, and identity achievement), and Berzonsky's (1989) identity *styles* (diffuse/avoidant style, information style, and normative style). The third construct, *boundaries*, was pulled from Minuchin's (1974) structural approach to family therapy, and Hartman's (1991) concept of boundaries in the mind. Exploration of the boundary differences among these key identity constructs was expected to provide a greater understanding of identity structure. Specifically, knowledge of which boundary types are used by the different statuses and styles informs understanding of how the structure of identity changes during developmental processes. These results are used to inform a structural understanding of identity, and have implications for identity theory in general, and for professionals working to foster identity formation processes. To examine boundary differences among identity statuses and styles, the following questions were asked:

Research questions.

1. Does identity status effect boundary scores?
2. Does identity style effect boundary scores?
3. Does identity status depend on identity style?

Where this analysis yielded significant differences among the statuses, styles, or the simple main effects of the interaction, the researcher conducted tukey's post-hoc analysis to identify the specific differences.

Definitions

Following is a list of terms and their definitions as they were used for this study.

Boundaries- “Invisible barriers that regulate contact” (Nichols & Schwartz, 2004, p. 108).

Constructivist view- A philosophical position on identity formation as a process of creating or constructing one’s identity amidst the vast number of possible identities that one might choose (Berzonsky, 1986a, 1989).

Commitment- “The degree of personal investment [an] individual exhibits” (Marcia, 1966, p. 551).

Crisis- Synonymous with ‘exploration’, crisis refers to the presence of an individual’s “engagement in choosing among meaningful alternatives” for identity commitment (Marcia, 1966, p. 551).

Cybernetics- The study of “control and communication in the animal and the machine” (Wiener, 1961). In cybernetic theory, systems self-regulate (control) by way of recursive feedback processes (communication).

Daimon- One’s true self, or “potentialities of each person, the realization of which represent the greatest fulfillment in living of which each is capable” (Waterman, 1984, p. 332).

Discovery view- A philosophical position on identity formation as a process of discovering one’s daimon (or true self) and living in a manner that is congruent with it (Waterman, 1984).

Ego Identity- Those core aspects of an individual’s self that are synthesized and manifest as unique characteristics that maintain continuity over time. These are considered deeply private and therefore are not so willingly shared or expressed (Erikson, 1968).

Exploration- Engagement in the pursuit and honest consideration of meaningful alternatives for identity commitment. Synonymous with ‘crisis’ (Matteson, 1972).

Feedback- “A circular causal process in which a system’s output is returned to its input, possibly involving other systems in the loop” (Krippendorff, 1986).

Grotevant’s Process Model- A comprehensive model of the identity development process that involves four primary components: 1) individual characteristics, 2) contexts of development, 3) the identity formation process, and 4) interdependencies between different identity domains (Grotevant, 1987).

Group Identity- Those aspects of the self that represent group identification. The degree to which a group’s values and practices resonate with the individual’s self (Erikson, 1968).

Identity- The collective and multifaceted sense of self, which is established by psychological identifications through exploration and commitment (Erikson, 1968; Marcia, 1966).

Integration- In structural theory integration is the process of the identity boundary structure becoming more diffuse in order to integrate (or draw in) a new commitment within that boundary structure.

Identity Control Theory- A micro-process model of identity development articulated by Kerpelman et al. (1997a). The model is based in cybernetic theory and addresses the process of self-regulation through interpersonal feedback. The model features a negative feedback loop with five core components: 1) social behavior, 2) interpersonal feedback, 3) self perception, 4) identity standard, and 5) a comparator mechanism.

Identity Status- A categorical construct that organizes people according to their levels of identity exploration and commitment. There are 4 statuses (categories): Identity diffusion, identity foreclosure, moratorium, and identity achievement (Marcia, 1966).

Identity Structure- In structural theory identity structure is the framework of identity that allows for the functioning of that identity as an independent system. The more developmentally established this structure is the more efficient it is at organizing identity content.

Identity Style- A collective set of strategies by which one approaches the identity formation process. There are three potential styles: Diffuse/avoidant style, information style, and normative style. While each style is used by all, individuals are considered to have a primary style (Berzonsky, 1989).

Synthesis- In structural theory synthesis is the process of the identity boundary structure solidifying to externalize new potential commitments in order to focus on synthesizing (re-establishing and/or re-organizing) the collective self, making it a distinct and cohesive unit.

Individualization- The process of “becoming more fully [oneself] in relation...[it] is reinvested in revised relatedness” (Josselson, 1994, p. 83).

Individualization Process Model- A model of identity development articulated by Schwartz (2002) that integrates both the discovery and constructivist approaches to identity formation. The model includes four categories of the individualization process: 1) default individualization, 2) self-construction, 3) emergent discovery, and 4) self-realization.

Negative Feedback Loop- A feedback loop that reduces deviation from the function of the system, resulting in greater stability and efficiency of that system (Keeney, 1983).

Personal Expressiveness- When one’s actions or behaviors are congruent with their daimon (or true self) resulting in feelings of life and fulfillment (Waterman, 1992).

Personal Identity- Those aspects of the self that are negotiated, expressed, and reflected within ones environment. These aspects are recognized by “others in the immediate community” (Erikson, 1968, p. 50).

Limitations

Limitations of this research project began with its non-experimental design. The benefit of convenience for this study came at two significant costs, a non-random sample selection, and a single measure with no control. These limitations restricted the study from deducing any cause-effect relationship in the data, which limited the potential strength of this study’s findings (Reis & Judd, 2000). Additional limitations in this study stemmed from the survey format for gathering data. Surveys provide self-report data, which is subject to social desirability (Hancock, 2001; Smith, 1967). Two primary limitations that accompany survey research are: 1) the level of non-response (Ornstein, 1998), and 2) the elements of “random error, some invalidity, and effects of the question format” (Ornstein, 1998, p. 115).

Non-response in survey research is an issue in two ways, it manifests in the overall response rate of a survey, and in the non-response of items on the survey among those who participate. Estimates from Porter (2004) average the overall response rates in survey research at just over 20%, and Shirmer (2009) expresses that response rates of 10 to 15% are not uncommon. Dillman et al. (2009) offer a more optimistic view, noting most response rates above 55%, particularly for surveys designed according to the Total Design Method (Dillman, 1991). The application of this issue for this study was that those who chose to participate in the study may have represented a distinct population from those who chose not to participate, threatening the validity of the study (Ornstein, 1998). For those participants that participated but missed or skipped items on the survey, the same issue arose. “One cannot assume that the respondents and non-respondents were [*sic*] basically alike” (Ornstein, 1998, p. 115). In designing the study the

specific rates of non-response (overall and by item) could not be predicted by this author, though non-response issues were expected. While the effects of low response or non-response on the power of analyses were factored into the study's design (targeting a larger number of participants to acquire necessary power), the potential for disparity between those who chose to participate and those who chose not to participate in the study still remained.

The limitations of this survey research through elements of “random error, some invalidity, and effects of the question format” (Ornstein, 1998, p. 115) had to do with the accuracy of the survey in measuring what it sought to measure, or its validity. An important aspect of determining the accuracy of measurement is the internal reliability of the measure (Gliem & Gliem, 2003). Alpha reliabilities varied for each measure in this study, and even more so among domains in each measure. Lower alpha levels (such as those at .58 for the EOM-EIS) result in greater levels of error, which translated in this study to lower validity (Gliem & Gliem, 2003). As mentioned by Ornstein, these threats to validity increased even more with random error and effects of the question format used.

Summary

This study focused on exploring the role of boundary structures in delineating identity. The researcher utilized a survey to gather data in order to explore the impact of identity status and identity style on boundary scores. Results of this research inform structural views on identity theory in general, and the work of professionals seeking to foster identity formation in their clients or students. For instance, clients/students utilizing different boundaries to regulate identity-related interactions may require different approaches and interventions from professionals working with them. This research study additionally informs the processes by which these clients/students negotiate those identity-related interactions.

Chapter 2

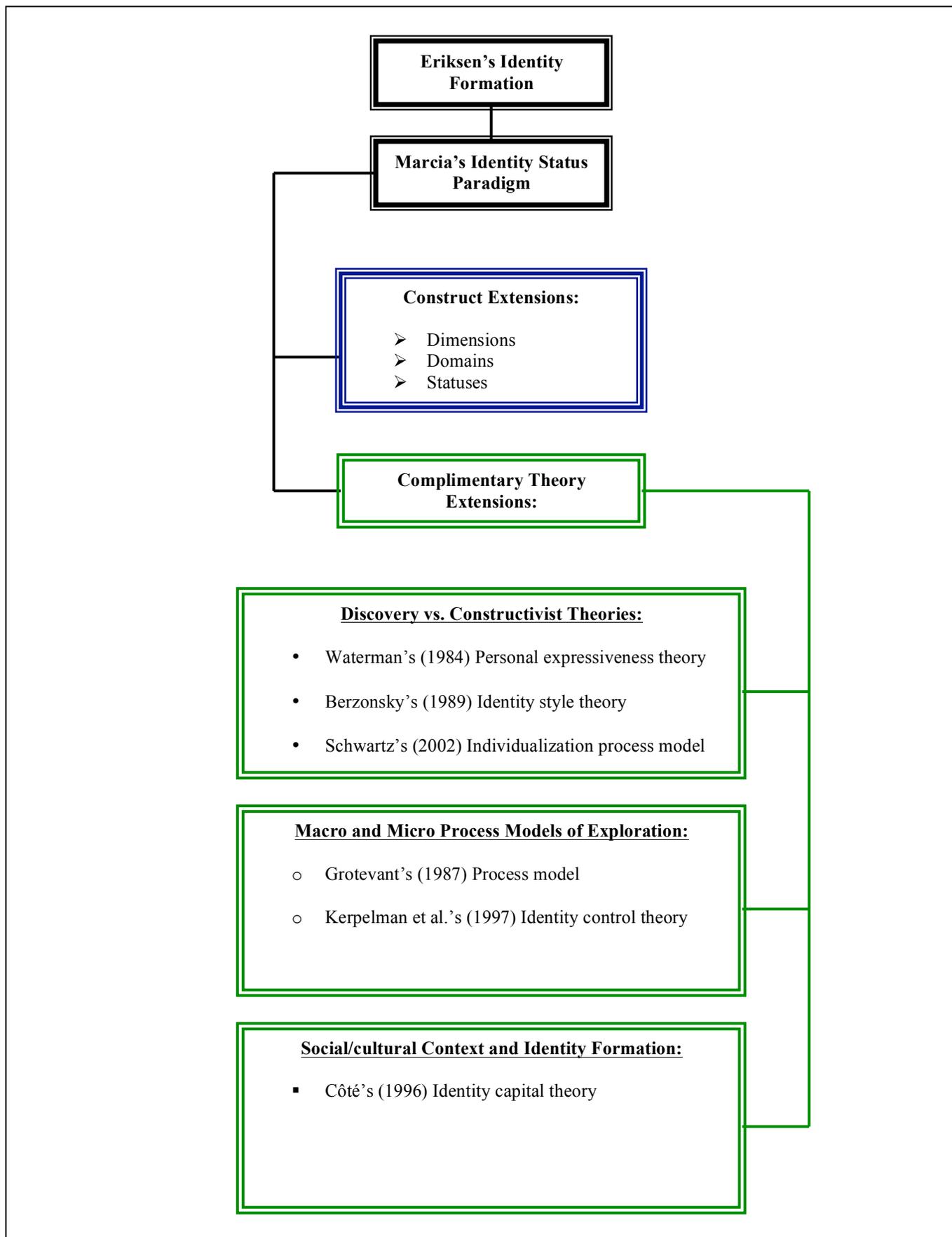
Literature Review

The focus of this study was on identity and the process through which individual's identities form. Specifically, I explored the role of boundaries in delineating identity, and how those boundaries change during the identity formation process. This chapter is organized into three major sections: 1) The origin and operationalization of identity theory, 2) A structural theory of identity development, and 3) Relating other identity theories to the structural theory of identity development. The first section, *the origin and operationalization of identity theory*, is an overview of the literature on identity theory to date. It begins with a review of Erikson's (1950, 1968) work on identity formation and Marcia's (1966, 1967) operationalization and organization of the identity status paradigm. Further developments that stem from these seminal works are then organized into construct extensions and complimentary theory extensions. The second section, *a structural theory of identity development*, introduces a new theory of identity formation articulated by this author, which emphasizes the structure of identity and its role in the process of identity formation. Finally, the third section, *relating other identity theories to the structural theory of identity development*, addresses the relationship that structural theory has with theories discussed in the literature review.

The Origin and Operationalization of Identity Theory

This first section of the chapter reviews the literature on identity theory to date. A graphic illustrating the organization of this section can be seen in figure 1. It begins with a review of the seminal works of Erik Erikson (1950, 1968) and James Marcia (1966, 1967), and continues on

Figure 1: Organization of Identity Theory Models



to review other identity theory developments that stem from these original works. These further developments are organized into two sections: Construct extensions, and complimentary theory extensions. Construct extensions involve expansion in each of the three categories of Marcia's identity status paradigm: dimensions, domains, and statuses. Complimentary theory extensions are additional identity theories that compliment and enhance Marcia's original identity status paradigm, and are organized into three subsections: Discovery versus Constructivist theories, macro and micro process models of exploration, and social/cultural context and identity formation.

Erikson's Identity Formation

Erikson's (1950) theory of psychosocial development introduced identity as a major developmental construct by placing it within the primary stage faced by adolescents: "identity vs. role confusion" (p. 261). Here, identity is posed in opposition to role confusion, as they might exist on opposite ends of a continuum. Being the developmental goal, a synthesized identity is considered to form through the individuals' interaction with their social environment and build upon the completion of previous stages of development (Erikson, 1968). It forms as the individual grows more sure that their internal sense of themselves mirrors others' experience of them (Erikson, 1950).

As adolescents enter the identity vs. role confusion stage of psychosocial development, Erikson (1950, 1968) describes them as existing in a moratorium, characterized as an in-between state where the adolescent is beyond childhood but not yet in adulthood. Erikson (1968) defines psychosocial moratorium as:

...a delay of adult commitments, and yet it is not only a delay. It is a period that is characterized by a selective permissiveness on the part of society and of provocative

playfulness on the part of youth, and yet it also often leads to deep, if often transitory, commitment on the part of youth, and ends in a more or less ceremonial confirmation of commitment on the part of society. (p. 157)

During this moratorium, adolescents search “the social values which guide identity” (Erikson, 1950, p. 263) as they work to “connect the roles and skills cultivated earlier with the ideal prototypes of the day” (Erikson, 1968, p. 128). Social pressures and the internal drive toward intimacy motivate the adolescent toward commitments (occupational, ideological, relational), the degrees of which represent the identity side of the continuum. Yet, not all emerge from this moratorium with commitments. Erikson (1950, 1968) describes the role confusion side of the continuum as a possible outcome, which is characterized by “interpersonal fusion” (1968, p. 167) in intimate relationships (family, friendship, romantic), and the “inability to settle on an occupational identity” (1950, p. 262). He also describes how cases in which individuals are at the extreme identity confusion end of the continuum can be the result of their “attempt to postpone and to avoid... a psychosocial foreclosure” (1968, p. 167). This psychosocial foreclosure represents forced commitments that catapult the individual into an identity that is not synthesized. The psychosocial moratorium then, is considered an essential experience for the adolescent moving towards a synthesized identity, which is distinguished from both identity confusion and a foreclosed identity.

In a review of Erikson’s work, Schwartz (2001) points out that the healthy identity has the characteristics of both self-knowledge and the awareness that aspects of the self are still yet unknown. For this reason the person with a synthesized identity makes commitments but seems to maintain a certain flexibility in those commitments. One’s “commitments might be seen as comprising a relative hierarchy- not so rigid that he could not shift from one role to another (e.g.,

work to social or family life) and not so fluid that he is often confused or conflicted about what he values most” (Bourne, 1978a, p. 228).

Alluding to this balance between rigidity and fluidity, Erikson (1968) describes the self-definition of a synthesized identity as “attained but forever to-be-revised” (Erikson, 1968, p. 211). Viewing the continuum between role confusion and identity that is implied by Erikson (1950) as one reflecting the increasing fluidity of role confusion on one side and rigidity of commitments on the identity side, “it follows, then, that the optimal placement along this axis is said to be near the midpoint but slightly closer to identity...” (Schwartz, 2001, p. 9).

Building on his theory of identity, Erikson (1968) also discussed identity as having three distinct levels: ego identity, personal identity, and group identity. These levels could be seen as representing different degrees of interaction and influence between one's identity and their context (Erikson, p. 208). The *ego identity* represents core aspects of an individual's self that are synthesized and manifest as unique characteristics that maintain continuity over time. Characteristics of the ego identity may be considered deeply private and therefore not so willingly shared or expressed. The *personal identity* consists of those aspects of self that are negotiated, expressed, and reflected within one's environment. These are aspects of the ego identity recognized by “others in the immediate community” (Erikson, p. 50). They might include views on political topics, occupational goals, and activity preferences. *Group identity* represents group identification. It is the degree to which a group's values and practices resonate with the individual. Aspects of the group identity can be found in race and ethnicity, gender, and culture.

Erikson's theory of identity is broad, providing an intricate and multifaceted description of the identity formation process, including the immense role of social context and socio-

environmental factors involved. Such an expansive concept is a profound advancement of theory, yet has been elusive for those desiring to study the concept by scientific means. Erikson (1950) was himself aware that the nature of his writing lacked the solidarity that his readers might desire (p. 16). The result has been a number of attempts by various researchers to operationalize and measure Erikson's identity theory.

There were several early attempts to operationalize and measure identity by way of Q sorts and self-reports measures, but it was the Identity Status Paradigm developed by James Marcia (1966) that spurred a massive outpouring of research on identity theory (Bourne, 1978a, 1978b; Schwartz, 2001). Housed within Erikson's (1968) personal level of identity, this paradigm targeted key concepts in Erikson's theory to operationalize and organize into four identity statuses and 2 dimensions. Marcia's identity statuses provided concise, easily understood identity types, which he measured by way of semi-structured interviews.

Marcia's Identity Status Paradigm

Pulled almost directly from Erikson's writings, Marcia (1966) operationalized four identity statuses: identity achievement, moratorium, identity foreclosure, and identity diffusion. These four statuses were organized according to two dimensions, commitment and crisis, within three domains, occupation, religious ideology, and political ideology. Commitment was considered the extent to which one was personally invested within a domain, while crisis referred to the presence of an individual's "engagement" in considering "meaningful alternatives", or a period of exploration (p. 551). Utilizing a semi-structured interview, Marcia (1966) explored these dimensions within the domains of occupation, religious ideology, and political ideology, in order to determine participants' identity statuses.

Individuals fitting the *identity achievement* status reflect a level of commitment after a time of exploration (or crisis) (Marcia, 1966). From a developmental standpoint, this status is considered the most advanced and mature (Archer & Waterman, 1990; Berzonsky & Kuk, 2000; Côté & Schwartz, 2002; Marcia, 1966; Waterman, 1982) being identified with a strong differentiated and integrated sense of self (Bourne, 1978b; Kroger, 1993; LaVoie, 1976; Marcia, 1966, 1967, 1994b; Papini, Micka, & Barnett, 1989; Perosa, Perosa, & Tam, 2002), high self-esteem (Marcia, 1980), balance in thinking (Boyes & Chandler, 1992; Côté & Schwartz, 2002; Marcia, 1966, 1994b), reflexivity (Boyes & Chandler, 1992; Waterman & Waterman, 1974), and overall well-being (Waterman, 2007). These characteristics synchronize well with a description of identity achievement individuals as effective at making decisions (Kroger, 1993; Marcia, 1980, 1994b) with high levels of moral reasoning (Cauble, 1976; Marcia, 1980; Podd, 1972). They have also been described with high motivation and autonomy (Berzonsky & Kuk, 2000; Côté & Schwartz, 2002; Marcia, 1980; Orlofsky, Marcia, & Lessor, 1973; Toder & Marcia, 1973), and solidified future direction (Côté & Levine, 1983). Relationally, identity achievement individuals are more capable of engaging in intimate interpersonal relationships (Adams & Archer, 1994; Årseth, Kroger, Martinussen, & Marcia, 2009; Craig-Bray, Adams, & Dobson, 1988; Marcia, 1976, 1980, 1993a, 1994b; Orlofsky et al., 1973) tending to be more connected to their families and involved in their communities (Côté & Schwartz, 2002; Papini et al., 1989; Perosa & Perosa, 1993; Perosa, Persoa, & Tam, 1996, 2002). Such a description of identity achievement individuals generally reflects their flexible commitments from which meaningful interactions and relationships grow (Marcia, 1976).

Participants in the *moratorium* status are in exploration and have, therefore, not yet made commitments. This status is considered the transition phase that precedes identity achievement.

These individuals are considered to be highly autonomous (Berzonsky & Kuk, 2000; Marcia, 1966, 1967, 1980; Marcia & Friedman, 1970; Schenkel & Marcia, 1972) and open minded (Côté & Levine, 1983; Schwartz, 2001), exercising both “adaptive regression” (Bilsker & Marcia, 1991, p. 76), and strong critical thinking skills (Berman, Schwartz, Kurtines, & Berman, 2001) in their approach to matters relevant to identity formation. Their self-esteem is generally stable (Marcia, 1967), though they experience high levels of anxiety and stress during this stage (Côté & Levine, 1983; Kidwell & Dunham, 1995; Marcia, 1967, 1980, 1994b; Meeus, 1996; Oshman & Manosevitz, 1974). Without personal commitments those in moratorium tend to exhibit low levels of community involvement (Côté & Schwartz, 2002). Due to the high levels of stress and anxiety for this status, it may be short lived in transition to identity achievement (Marcia, 1994b).

Those in the *identity foreclosure* status have made commitments without having experienced a time of exploration (Marcia, 1966). They are associated with an authoritarian value system (Marcia, 1966, 1967, 1980; Marcia & Friedman, 1970; Matteson, 1972; Schenkel & Marcia, 1972), and a rigid resistance to change (Marcia, 1976, 1980, 1994a). These individuals have close relationships with their parents that are relatively low in overt conflict (Adams, Dyk, & Bennion, 1987; Marcia, 1980, 1994a, 1994b; Perosa et al., 2002; Schwartz, 2001), but have a low capacity for forming intimate interpersonal relationships with peers (Adams & Archer, 1994; Årseth et al., 2009; Berzonsky & Kuk, 2000; Marcia, 1976, 1980; Orlofsky et al., 1973). They have a high need for social approval (Berzonsky & Kuk, 2000; Côté & Levine, 1983; Marcia, 1967) which seems to lead to unreasonable expectations of themselves (Marcia, 1966), and a generally “frail” identity (Marcia, 1994a; Orlofsky et al., 1973) that tends toward self-consciousness (Papini et al., 1989), struggles under stress (Bob, 1968; Marcia, 1966, 1980), and dependency and vulnerability to discrepant information and manipulation (Côté &

Levine, 1983; Marcia, 1966, 1967, 1980). This description of identity foreclosed individuals reflects a rigidity in their commitments that is restrictive in relationships and creates pressure on the individual.

The *identity diffusion* status includes those individuals who have made no commitments and are not exploring alternatives for commitment. They are generally characterized by a life that is “scattered and directionless” (Marcia, 1976, p. 147). With low motivation, and a tendency toward dependence on others (Berzonsky & Kuk, 2000; Côté & Schwartz, 2002; Marcia, 1980), those in the identity diffusion status tend to conform (Marcia, 1994b; Toder & Marcia, 1973) and are at risk for depression, drug and alcohol issues, academic and work problems, and a general lack of well-being (Berzonsky, 1985; Berzonsky & Kuk, 2000; Côté & Schwartz, 2002; Schwartz, 2001; Marcia, 1980, 1993b; Waterman, 2007). As these risk factors are associated with withdrawal, it is not surprising that those fitting this status are generally socially withdrawn (Berzonsky & Kuk, 2000; Côté & Schwartz, 2002; Meeus & Dekovic, 1995), withdrawing particularly in stressful circumstances (Bob, 1968, Marcia, 1967, 1980). Also associated with this withdrawal, individuals in identity diffusion tend toward a low capacity for intimacy within familial and interpersonal relationships (Adams & Archer, 1994; Årseth et al., 2009; Berzonsky & Kuk, 2000; Josselson, 1987; Marcia, 1976, 1980, 1994b; Orlofsky et al., 1973; Papini et al., 1989; Perosa et al., 1996, 2002; Raskin & Waterman, 1994; Schwartz, 2001). These findings characterize identity diffuse individuals with a lack of any cohesive identity structure.

Marcia’s identity status paradigm has proven to be an effective operationalization of Erikson’s identity theory, yet does not provide a strong developmental structure for identity formation (Grotevant, 1986). Marcia (1966) understood Erikson’s writings to imply that identity achievement and identity fusion are “polar alternatives of status” (p. 551). Along this line, he

considered identity achievement to be the most developmentally advanced of the statuses and identity diffusion to be the lowest developmental status, with moratorium as the transition status from diffusion to achievement. However, there seems to be a lack of clarity in Marcia's developmental organization concerning the identity foreclosure status. The foreclosure status is pictured as an alternative to development. Rather than exploring alternatives as those in moratorium, those in the identity foreclosure status simply made identity commitments based on what was first presented to them, a sort of leap of faith from the identity diffusion status to the identity foreclosure status. However, this organization and sequence of identity formation was still established on Erikson's theory, not on empirical support. While Marcia's semi-structured interview provided empirical support for the operationalization of Erikson's identity theory into the four statuses, it was not designed to validate any sort of identity formation sequence (Grotevant, 1986; Matteson, 1972; Meeus et al., 2002).

Further Developments in Identity Theory

Developments that build on, or compliment, Marcia's identity status theory are organized here into two categories: construct extensions, and complimentary theory extensions. These categories are distinguished by the nature of their content. The construct extensions have taken Marcia's original constructs (statuses, dimensions, and domains) and added to them in order to acquire more accurate placements in the identity statuses and a more thorough understanding of what these statuses entail. The complimentary theory extensions are additional theories that contribute to the identity status paradigm or identity theory in general. So the first category provides additional constructs to work with, while the second category primarily provides additional theories to consider.

Construct extensions.

Marcia's (1966) original identity status paradigm involved the investigation of two dimensions (exploration and commitment) within three domains (career, political ideology, and religious ideology) in order to determine individuals' placement within one of four identity statuses (identity achievement, moratorium, identity foreclosure, and identity diffusion). While these original dimensions, domains, and statuses remain foundational to the investigation of identity, many researchers have suggested extensions within each category. These suggested extensions are intended to result in a more holistic view of identity and/or improve the accurate measurement of it.

Dimensions.

Concerns about the limitations of Marcia's exploration and commitment dimensions have been voiced by various researchers. In 1972, Matteson expressed concern that Marcia's dimensions of exploration and commitment were polarized dimensions, suggesting that there be a third dimension to mediate the two. Other work by Grotevant (1987) suggested that different exploration processes exist that are not adequately addressed within one dimension. In the last decade studies employing varying dimensions have begun to emerge (Luyckx et al., 2005; Meeus et al., 2002).

Meeus et al. (2002) divided both of Marcia's dimensions of exploration and commitment by degree, resulting in four dimensions: high commitment, low commitment, high exploration, and low exploration. Identity statuses for participants were then explored according to various combinations of these dimensions (some combination of exploration and commitment). The various combinations of these dimensions resulted in new statuses, which correlate highly with Marcia's original identity paradigm. The combination of *low exploration and low commitment*

dimensions resulted in the diffusion status, which best correlates with Marcia's 'identity diffusion status'. By combining *low exploration and high commitment* dimensions, the authors came up with the closure status, which correlated with Marcia's 'identity foreclosure status'. *High exploration and low commitment* dimensions yielded the moratorium status, clearly reflecting Marcia's 'moratorium' status, and *high exploration and high commitment* dimensions yielded the achieving commitment status, correlating with Marcia's 'identity achievement status'.

Another study by Luyckx et al. (2005) broke down Marcia's dimensions into sub-dimensions, yet in a different way. Based on four dimensions (exploration in breadth, exploration in depth, commitment making, and identification with commitment), Luyckx et al. (2005) utilized a cluster analysis to derive their own identity statuses for comparison against Marcia's original statuses, which were based on the two dimensions of commitment and exploration. Similar to the work of Meeus et al. (2002) the four dimensions utilized by Luyckx and colleagues are actually more specific sub-dimensions of those originally considered by Marcia. *Exploration in breadth* refers to the accumulation of information about multiple alternatives to inform decisions. Implicitly it appears that this is to inform decisions to come rather than those currently held. *Exploration in depth* pertains to information gathering for the purpose of maintaining and tending to current decisions or choices. *Commitment making* is the making of decisions or choices, while *identification with commitment* refers to the "degree of identification with these choices" (p. 606).

These studies (Luyckx et al., 2005; Meeus et al., 2002) expanded the dimensions of exploration and commitment by developing sub-dimensions within each category. While they continue to categorize participants according to Marcia's dimensions, these researchers have

made an important contribution by suggesting that each dimension actually operates in degrees of exploration and commitment. Rather than viewing exploration as something that has or has not occurred, it is much more accurate to consider exploration to have occurred at some degree along a continuum. Similarly, it is more accurate to consider degrees of commitment rather than dichotomous (committed or not committed) categories.

Domains.

Concern that the career, religious and political ideology domains established by Marcia (1966) did not adequately measure the identity statuses of women spawned further developments by Grotevant et al. (1982). These researchers introduced three new interpersonal domains (friendship, dating, and sex roles) integrating them into Marcia's Identity Status Interview. Gender differences in identity measurement had been demonstrated by numerous prior researchers, all highlighting some form of interpersonal relating as salient for female identity (Douvan & Adelson, 1966; Josselson, Greenberger, & McConochie, 1977; Stein & Bailey, 1973). Additionally, Erikson in 1968 had referred to the strong relational influence in psychosexual development as unique to women's identity. Based on this prior work, Grotevant and colleagues established the three distinct interpersonal domains of friendship, dating, and sex roles.

Also addressing the interpersonal aspects of identity, Rogow et al. (1983) extended the identity status paradigm to include two new domains: attitudes towards sexual expression, and sex-role beliefs. Conducting a study with these two new domains, the authors found that these interpersonal arenas were salient for both women and men. These findings are in support of Matteson's (1972) work which found sex roles to be very important to both females and males in their identity negotiations. These studies mark a shift in identity development research

concerning gender. Up to this point “a neat split existed between predominately male identity issues of occupation, religion, and politics, and predominately female issues of sexuality and sex roles” (Patterson, Sochting, & Marcia, 1992, p. 15). In the late 1970’s and early 1980’s this split deteriorated, revealing each of these domains to be salient for both men and women (Patterson et al., 1992; Raphael, 1977).

Now, nearly all identity research conducted utilizes updated measures that include interpersonal domains. In addition to the updates on the identity status interview protocols already described, such domain extensions are reflected in two other identity measures that dominate the field, the Extended Objective Measure of Ego Identity Status (EOM-EIS), and the Ego Identity Process Questionnaire (EIPQ). The EOM-EIS consists of the ideological domains: occupation, religion, politics, and philosophical life-styles; and the interpersonal domains of: friendship, dating, sex roles, and recreation (Bennion & Adams, 1986). The EIPQ consists of the ideological domains: occupation, religion, politics, and values; and the interpersonal domains of: family, friendships, dating, and sex roles (Balistreri, Busch-Rossnagel, & Geisinger, 1995).

Statures.

Extensions have also been suggested by numerous researchers for Marcia’s original identity statuses (identity achievement, moratorium, identity foreclosure, and identity diffusion). These extensions have been birthed out of a concern that the statuses are not fully homogenous groups, but forced categories of identity characteristics (Archer & Waterman, 1990; Berzonsky, 1985). To clarify differences among individuals categorized within each status, these extensions have resulted in suggested sub-statuses, particularly within the identity foreclosure and diffusion statuses.

There have been numerous suggestions for sub-divisions within the identity foreclosure and diffusion statuses. The identity foreclosure status has been sub-divided into firm foreclosure and developmental foreclosure (Archer & Waterman, 1990), long-term foreclosure and transient foreclosure (Berzonsky 1985), and psychic foreclosure and situational foreclosure (Henry & Renaud, 1972). Each of these sub-divisions tends to distinguish between permanency in the status and temporal standing in the status.

Sub-divisions within the identity diffusion status have been a little more complicated. While Marcia (1966) suggested distinguishing between schizoid diffusion and playboy diffusion, Josselson (1987) suggested four different sub-divisions of the status: foreclosed diffusion, moratorium diffusion, previous developmental deficits, and severe pathology. Archer and Waterman (1990) also highlight Marcia as delineating four different types of identity diffusion in a presentation. These sub-divisions of the status included disturbed diffusion, carefree diffusion, culturally adaptive diffusion, and developmental diffusion. A number of distinctions are made in these various subdivisions. Individuals more permanently established in the status are considered to have greater severity of problems, exemplified by Marcia's (1966) schizoid diffusion status, his disturbed diffusion status highlighted by Archer and Waterman (1990), and Josselson's (1987) severe pathology. The choice of an identity diffusion type life is represented by the playboy diffusion, carefree diffusion, and culturally adaptive divisions suggested by Marcia, and appear to serve various adaptive purposes. Finally, there are sub-divisions representing temporal belonging to the identity diffusion status. These divisions include Josselson's moratorium diffusion and Marcia's developmental diffusion.

The most systematic delineation of divisions within the foreclosed and diffusion identity statuses was introduced by Archer and Waterman in 1990. These authors referred back to

Erikson's (1950) theory of psychosocial development to inform their establishment of sub-divisions for both diffusion and foreclosed identity statuses. These sub-divisions reflect various paths to the status, many of which are tied to Erikson's stages of development.

Archer and Waterman (1990) came up with six identity diffusion sub-divisions, delineated by their differences in motivation and expression: 1) Precrisis identity diffusion, 2) apathetic identity diffusion, 3) alienated identity diffusion, 4) pathological identity diffusion, 5) marginally involved identity diffusion, and 6) commitment-avoiding identity diffusion.

Individuals within the *precrisis* division are described as aware that identity issues need to be addressed, but who are not yet at a place to deal with them developmentally. These individuals recognize that identity issues will become more salient as life continues. Those in the *apathetic* division of the diffusion status are characterized by a lack of interest in making commitments. They are not interested in making current commitments nor do they foresee a time when they will be interested. They come off as not caring, which the authors assert is a defense mechanism for their insecurity, and is a remnant issue from Erikson's (1950) first stage of psychosocial development: trust versus mistrust. The *alienated* division described by Archer and Waterman is also characterized as having no interest in making current or future commitments, but differs from the apathetic division in the manner that they express this. This division is described as expressing anger at there being identity tasks to address. Similar to the apathetic division, the authors view this anger as a defense mechanism, yet they view it as stemming from Erikson's (1950) "autonomy versus shame and doubt" stage of psychosocial development. Individuals fitting the *pathological* division are distinguished by the "organic or developmental disturbances unrelated to identity issues" that account for their membership in the diffusion status (p. 104). *Marginally involved* individuals are portrayed as differing to others and "responsive to

environmental expectations” (p. 104). This group is considered to belong to the diffusion status because of difficulties in Erikson’s (1950) “initiative versus guilt” stage of psychosocial development. Finally, those in the *commitment-avoiding* division of the diffusion status are depicted as being “committed to not being committed” (p. 105). This group is considered to be closely related to the moratorium status because they enjoy the freedom of various “experimentations”, yet are different from moratoriums in that they cling to that freedom rather than experimenting for the purpose of honing choices for the sake of commitment.

Five different identity foreclosure sub-divisions were established by Archer and Waterman (1990) based on the way commitments were made, and the timing of and motivation for these commitments. These sub-divisions include: 1) Open foreclosure, 2) closed foreclosure, 3) premature foreclosure, 4) late developing foreclosure, and 5) appropriated foreclosure. Those fitting into the *open foreclosure* division were depicted by a higher level of flexibility than other divisions. This flexibility exhibits itself in their ability to remain calm (as opposed to defensive) when views or perspectives other than those they are committed to are discussed. The authors express that people fitting this division of foreclosure were largely successful in negotiating Erikson’s (1950) earlier stages of psychosocial development. In opposition to open foreclosures, Archer and Waterman (1990) characterize individuals in the *closed* division as having strong defensive reactions to the suggestion of options that are not in line with their own commitments. This is said to result from difficulties concerning trust of oneself and others, but particularly trusting oneself. Foreclosures of the *premature* division are described as making early life commitments. Many are said to make these commitments during Erikson’s (1950) industry versus inferiority stage of development. *Late developing* foreclosure types exemplify the opposite approach to identity issues than those in premature foreclosure. These individuals

belonged to the diffuse identity status into adulthood, and once commitments had to be made they catapulted into the first available option. This group is considered to have struggled in negotiating Erikson's (1950) "initiative versus guilt" stage. Finally Archer and Waterman (1990) described *appropriated* foreclosure as comprised of individuals who completely adopt other's beliefs and views as their own. As an example, these individuals may have an experience of "conversion in which an entire life style and ideology may be incorporated into the self" (p. 107). Individuals in this division of foreclosure are considered to have remnant difficulties with Erikson's (1950) "trust versus mistrust" stage of development. This lack of trust is skewed very strongly toward a lack of trust in themselves.

Each of these works (Archer & Waterman, 1990; Berzonsky, 1985; Henry & Renaud, 1972; Josselson, 1987; Marcia, 1966) has suggested extensions for Marcia's original identity statuses (identity achievement, moratorium, identity foreclosure, and identity diffusion). These extensions, or sub-statuses, focus on the foreclosed and diffusion statuses and appear to serve two purposes: 1) Recognizing degrees of entrenchment in a status, and/or 2) recognizing the many roads to both the foreclosed and diffusion statuses. The significance of the first purpose for these sub-statuses is recognizing a continuum of entrenchment within the foreclosed and diffuse statuses. These sub-statuses suggest degrees of diffusion and degrees of foreclosure rather than hard and fast categories. The second purpose for the sub-statuses mentioned above is important in that it provides theoretical contribution about why individuals reflect a given identity status. This would be particularly salient for mental health professionals because the manner in which they work with clients would be informed by this information.

Complimentary theory extensions.

Previously highlighted by Matteson (1972), and Meeus et al. (2002) is the limitation of Marcia's (1966) identity status theory with regard to a developmental process of identity formation. As research in identity theory has developed over time, Marcia's (1966) identity status theory has been enhanced and extended by additional complimentary theories, which emphasize the developmental process. Waterman's personal expressiveness theory was introduced in 1984, emphasizing identity formation through discovery, while Berzonsky's (1989) identity style theory counters the discovery view by offering a constructivist theory of identity formation. Schwartz's (2002) individualization process model makes a case for the integration of both Waterman's discovery approach and Berzonsky's constructivist approach by arguing that each addresses different levels of identity (ego identity, personal identity, group identity) as articulated by Erikson (1968). Bypassing the philosophical arguments of a discovery vs. constructivist views of identity formation, Grotevant (1987) focused more on the content of identity and how it interacts during the exploration process. He introduced his process model, with a comprehensive and in depth focus on the exploration process of identity formation. While Grotevant's work provided a comprehensive view of exploration, Kerpelman, Pittman, and Lamke (1997a) provided a micro-process framework of this exploration that compliments Grotevant's work. This micro-process approach is called the identity control theory and draws from cybernetics to outline the self-regulatory functioning of identity. Finally, there is Côté's (1996, 1997) identity capital theory. This theory draws from both a psychological view of identity (as grounded in Marcia's paradigm) and a sociological perspective on identity formation. Each of these complimentary theories has spurred additional and valuable research that has expanded our understanding of identity.

Discovery versus constructivist theories.

Personal expressiveness theory.

In establishing his personal expressiveness theory, Waterman (1984) described the identity formation process through two potential lenses: the process of discovery, and that of creation. While the same underlying processes of identity formation are said to be negotiated regardless of the lens used, the methods of negotiating these processes differs depending on whether one utilizes the discovery or creation lens. The common underlying process experienced includes three elements: “a) the sources of identity elements, i.e., from whence the ideas about particular goals, values, and beliefs arise; b) the methods used in the process of evaluating potential identity elements with respect to whether they are worthy as a basis for commitment; and c) the level of resolution of the task of identity formation, i.e., how it is recognized that the task has been successfully completed” (p. 334).

A number of potential sources for identity elements are suggested. Natural abilities such as those that come from genetic disposition are one source recognized through experimentation and feedback (feedback through a sense accomplishment and success, and feedback from external sources). Other primary sources of identity potentials are those modeled by others, and opportunities suggested. Identity elements might be modeled by parents, mentors, or others looked up to in ones life, while opportunities suggested can come in the form of something specific, like a job opportunity, or more general, like a suggestion to travel.

The second part of identity formation suggested by Waterman (1984) involved the methods used for tapping into identity sources and the consideration of elements found in those sources. Three methods were suggested: information gathering, experimentation, and discussing with others those elements being considered for commitment. These methods seem to progress in

order, with the gathering of information leading to a number of identity roles to experiment with and explore through conversation.

The resolution of an identity formation crisis is expressed as occurring on two levels, a rational level and an intuitive level. The rational level takes into account the weighing of the numerous different factors considered when making a commitment, while the intuitive level is based on whether an identity element “feels right” (Waterman, 1984, p. 336). Waterman stresses that these two levels are not mutually exclusive, but that it is likely that commitments typically necessitate congruence between the two.

These elements of the identity formation process are considered common underlying experiences for all. While they are commonly experienced, how they are experienced depends upon one’s approach to the identity formation task as one of discovery or of creation; these two different “metaphors” suggested by Waterman (1984) reflect deep philosophical positions, influencing one’s experience. According to Waterman (1992), those engaged in active identity discovery experience personal expressiveness...

when there is: (a) an unusually intense involvement in an undertaking, (b) a feeling of special fit or meshing with an activity that is not characteristic of most daily tasks, (c) a feeling of intensely being alive, (d) a feeling of being complete or fulfilled while engaged in an activity, (e) an impression that this is what the person was meant to do, and (f) a feeling that this is who one really is. (p. 58)

Waterman’s (1984) personal expressiveness theory is grounded in the discovery position and relies on the notion of the daimon (a philosophical concept referring to one’s “true self”).

Waterman describes the daimon in this way:

The daimon refers to those potentialities of each person, the realization of which represents the greatest fulfillment in living of which each is capable. These include both the potentialities that are shared by all humans by virtue of our common specieshood and those unique potentials that distinguish each individual from all others. The daimon is an ideal in the sense of being an excellence, a perfection toward which one strives and, hence, it can give direction and meaning to one's life. (p. 332)

Building on this concept of the daimon, Waterman expresses that individuals' identity formation is a process of discovering one's daimon and seeking to live in a manner that is congruent with it. Considering the identity process of Waterman's (1984) personal expressiveness theory, individuals would tend to rely more heavily on internal sources of identity elements, such as natural abilities. Information from outside sources would tend to be resisted and only accepted as they resonate with one's sense of their daimon. Their methods for considering various identity elements would be more limited to areas that utilize their natural tendencies, and they would tend to rely more heavily on intuition when resolving an identity formation crisis.

From a philosophical position that is in opposition to his personal expressiveness theory, the concept of identity formation as creation is also presented by Waterman (1984). He relates this creation metaphor to existential philosophy. From this position, there is no "true self" to be discovered, but rather each individual comes out of "nothingness" (p. 333). The challenge to identity formation from the creation perspective is the vast number of possibilities one has to choose from and pursue. The individual experiences a sense of "omnipotentiality...the feeling that the whole world is open before you; that you can become anything that you choose to become" (p. 333), but is urged to make commitments by both the fear of indefiniteness and the fear of stagnation. The fear of indefiniteness refers to a fear of not accomplishing anything as an

individual, while the fear of stagnation is the fear of not making a choice and committing. From this position, meaning in life is not inherent, but one may develop meaning in their life as they live productively. This process of productive living is considered a creative approach to identity formation.

Considering this lens in the underlying identity formation process, there is a greater openness to external sources of identity elements, such as those modeled and/or suggested by others. Feedback received from others would be relied upon more heavily, and the “success” of models is likely to play a larger role in their influence. Methods for considering these various identity opportunities are likely to cover a broader range of opportunities with more reliance on extrinsic rewards as feedback about the attractiveness of potential identity elements. In the task of resolving identity formation crises, the rational level is relied on more for those operating from a creation lens.

In his presentation of the identity formation process, the distinction between the discovery and creation lenses does not alter the underlying identity formation process occurring, but rather alters how one experiences and manages this process. Generally speaking, Waterman (1984) asserts that individuals operating from a discovery lens will rely more heavily on the internal processes during identity formation while those operating from a creation lens will tend more towards external processes during identity formation. Schwartz (2002) also supports this concept by saying that “Self-construction points principally to the importance of the outer world, whereas self-discovery points largely to the importance of the inner world” (p. 322).

Following Waterman’s (1984) work on personal expressiveness theory were a series of articles that clarified the underlying developmental assumptions of the discovery and creation metaphors (Berzonsky, 1986a, 1986b; Waterman, 1986). Waterman’s personal expressiveness

theory is in support of the discovery metaphor, while Berzonsky (1986a, 1986b) took a position that favored the creation or “constructivist” metaphor. Berzonsky expressed concern that the discovery approach is a passive approach that requires adolescents to have little to no responsibility for their identity formation process. In comparison, he further expressed that the constructivist approach assumes that the individual is personally responsible for the construction of their identity. One result from this dialogue was clarification and mutual affirmation that “personal involvement and accountability are desirable components of the identity-formation process” regardless of the preferred perspective utilized (discovery or construction) (Berzonsky, 1986b, p. 125). Additionally, Berzonsky’s (1986a, 1986b) support of the constructivist perspective on identity formation has been reflected in his theory of identity styles.

Identity style.

In contrast to the internal focus of Waterman’s personal expressiveness model is Berzonsky’s (1989) theory of identity styles, which operates as an externally focused constructivist view of the identity formation process. This theory emphasizes the process of identity formation within one of three approaches: 1) Information orientation, 2) Normative orientation, and 3) diffuse/avoidant orientation. Individuals characterized by the *information orientation* tend to gather and critically consider information before making decisions, resulting in “flexible commitments” (Berman et al., 2001, p. 514). They are strongly associated with Marcia’s (1967) moratorium and identity achievement statuses (Berzonsky, 1989, 1992a). The information orientation has also been associated with the processing of information, introspection and reflection, openness to experience, and an emphasis on a personal rather than collective or social identity (Berzonsky, 1993, 1994; Berzonsky, Ciecuch, Duriez, & Soenens, 2011; Berzonsky & Luyckx, 2008; Berzonsky & Sullivan, 1992); coping strategies that are

problem-focused, and include social support (Berzonsky, 1992b); and mature interpersonal relationships as well as the engagement and ability to operate autonomously in academic settings (Berzonsky & Kuk, 2000).

The *normative orientation* characterizes individuals who tend to conform to those standards and identity structures that are set for them by significant others (like their parents), typically manifesting as rigid or “inflexible commitments” (Berman et al., 2001, p. 514). This orientation is associated with Marcia’s foreclosure status (Berzonsky, 1989, 1992a), and typically use distancing and wishful thinking as coping strategies that distance them from the problem at hand, consequently the anxiety experienced by those of a normative orientation is often more debilitating to these individuals than for those utilizing an information orientation (Berzonsky, 1992b). This orientation is also associated with values of tradition, security, and conformity (Berzonsky et al., 2011), a hindering preoccupation with social expectations (Berzonsky & Luyckx, 2008), an emphasis on a collective identity (Berzonsky, 1994), and also a general closedness concerning values, actions, and fantasies (Berzonsky, 1993; Berzonsky & Sullivan, 1992).

Lastly, the *diffuse/avoidant orientation* represents those who put off important decisions until external pressures require them to be made. As implied by the label, this orientation is associated with Maricia’s identity diffusion status (Berzonsky, 1989, 1992a). Those utilizing a diffuse orientation are more selfish in their values (Berzonsky et al., 2011), found to utilize coping strategies that are self or emotion focused rather than problem focused, such as tension reduction, distancing, and wishful thinking (Berzonsky, 1992b) and are strategic in avoiding self-relevant information (Berzonsky & Ferrari, 2009). These individuals tend to emphasize a social identity, and are negatively associated with tendencies toward introspection, openness to new

experiences, and the active processing of information (Berzonsky, 1994; Berzonsky & Luyckx, 2008; Berzonsky & Sullivan, 1992). They additionally lack engagement and autonomy in their academic work, as well as struggle to form mature interpersonal relationships (Berzonsky & Kuk, 2000).

The identity style orientations established by Berzonsky (1989) have three levels in which they operate. The first and most basic level includes “cognitive and behavioral responses” used in handling day to day tasks or issues (p. 270). The second level has to do with “social cognitive strategies” for approaching daily tasks (p. 270). These strategies are organized and established cognitive and behavioral responses. Then at the third and most general level is the “identity style” itself, which is the strategy most relied upon in negotiating things related to identity formation (p. 270). It is assumed that all normally developing individuals are capable of utilizing each of the three identity styles by age 18, though they tend toward one particular style.

The individualization process model.

In 2002, Schwartz made a case for the theoretical integration of both Waterman’s (1984) discovery and Berzonsky’s (1989) constructivist perspectives. This stemmed from Erikson’s original works on identity, which suggested different levels of identity: ego identity, personal identity, and group identity. Schwartz expresses that the emphasis on internal processes by Waterman’s (1984) personal expressiveness theory reflects the more internal levels of identity such as the ego and personal identity levels, while the emphasis on external processes by Berzonsky’s identity styles reflects the more external levels of identity such as the group or personal identity levels. From this view these two approaches are not mutually exclusive, but are simply focused on different levels of an individual’s identity during the developmental process. In support of this view Schwartz highlighted commonalities between the two lenses that include

empirical associations with Marcia's identity status paradigm (Berzonsky, 1989; Berzonsky & Neimeyer, 1994; Schwartz, Mullis, Waterman, & Dunham, 2000; Waterman, 1993), and associations between Berzonsky's information style (considered the highest identity style) and high levels of personal expressiveness (Schwartz et al., 2000). With this groundwork Schwartz (2002) asserts that both self-construction and self-discovery are necessary in identity formation:

individuals succeeding in self-construction but not self-discovery would probably be characterized by contentment without passion, and individuals who have an idea of what they would like to be (i.e., the identity that they believe they can discover), but are unable to formulate a path toward that destination, would most likely be characterized by frustration. (p. 329)

Based on this integration of both discovery and constructivist approaches, Schwartz's (2002) individualization process model includes four categories of the individualization process: 1) default individualization, 2) self-construction, 3) emergent discovery, and 4) self-realization. The most basic category in this model is the *default individualization* category, representing a tendency for one's sense of self to change as the environmental context changes. This category appears to be closely linked to Marcia's identity diffusion status and Berzonsky's diffuse/avoidant style. *Self-construction* is the next category representing active and successful processing of contextually available options for identity elements. This category involves flexibility so that as contextual shifts occur the individual considers what to internalize into their identity and what to let go of. According to Schwartz, individuals can pass directly from default individualization to self-realization through the self-construction category without ever experiencing emergent discovery. However, others will enter the *emergent discovery* category from default individualization, where they "conceive of the identity destination" without having

constructed a route to achieve it yet (p. 331). These individuals then move into self-construction on their way to self-realization. Schwartz expresses that these “individuals who enter emergent discovery may be more likely to self-realize...than individuals who pass directly from default individualization to self-construction” (p. 331). The fourth category, *self-realization*, represents successful identity formation within the social and cultural context, but also the formation of an identity that resonates with their inner daimon.

Differences in philosophical foundations gave rise to these three identity theories (personal expressiveness, identity styles, and the individualization process model). Waterman’s (1984) personal expressiveness theory is grounded in a discovery view of identity formation, in which individuals’ seek to discover and live in congruence with their daimon. Berzonsky (1989) provided a constructivist view of identity formation in his identity style theory, which emphasizes personal responsibility for one’s identity formation process. The individualization process model articulated by Schwartz (2002) upholds both the discovery and constructivist views of identity formation by demonstrating how they emphasize different aspects (internal and external) of the identity formation process. The experience of identity formation through internal and/or external processes is well informed by each of these theories. The following section of this paper will shift in focus away from the influence of philosophical foundations on identity formation to more practical aspects of identity. Grotevant’s (1987) process model will address identity formation in a comprehensive manner, from personal and contextual characteristics that contribute to exploration, to how these characteristics interact during the exploration process. Fitting within Grotevant’s process model, the identity control theory offered by Kerpelman et al., (1997a) will also be discussed. It is considered a microprocess model that draws from cybernetic

theory. Cybernetics is the study of self-regulation within systems through the use of recursive feedback processes.

Macro and micro process models of exploration.

Grotevant's process model.

A comprehensive model for identity formation was developed by Grotevant in 1987. This model can be rather complicated, but contains four primary components: 1) individual characteristics, 2) contexts of development, 3) the identity formation process, and 4) interdependencies between different identity domains (such as work, belief system, political ideology, etc.). *Individual characteristics* represent those characteristics within the individual such as cognitive abilities, emotional regulation, personality, and more that influence one's tendency to engage in exploration or not, while *contexts of development* are those environmental influences on an individual's tendency to engage in exploration (or not), such as family, social and cultural values, friends, and more. The *identity formation process* is a model of identity formation for those that engage in exploration for a particular domain (work, belief system, political position, etc.), which depends on the individual characteristics and contexts of development. This identity formation process is considered the same for each identity domain in which it occurs, and the process in one domain is assumed to influence the process in other domains due to the *interdependencies between different identity domains*.

The *identity formation process* in Grotevant's (1987) process model begins with one's "orientation to engage in exploration" as determined by their individual characteristics and contexts of development (p. 205). For those that engage in the exploration process, Grotevant highlights five interacting variables that influence this exploration experience: 1) the individuals already established *expectations and beliefs* that contribute to this exploration process and

experience, 2) the methods and behaviors that are utilized in the *exploration* process itself, 3) the amount of *investment* the individual feels in the exploration process for the given domain (assumed to increase with time), 4) the strength and influence of other alternatives or *competing forces* within this identity domain (such as switching career choices), and 5) *interim evaluations* of the exploration process itself which may determine whether one continues in the exploration process. The interaction of these five variables results in both affective and cognitive outcomes, which are integrated into a sense of identity. This new sense of identity is then evaluated by the individual for how well it meets his/her needs and resonates with other aspects of identity. These last two steps in the identity formation process, “identity consolidation” and “identity evaluation” are then utilized by the individual in further decisions concerning exploration.

Identity control theory.

Introduced as a micro-process model for its fit within Grotevant’s (1987) identity formation process, identity control theory (Kerpelman et al., 1997a) is based in cybernetics; addressing the process of self-regulation that occurs with a given behavior through interpersonal feedback. This feedback loop (based in cybernetic theory) is a continuous process that repeats itself with new behavioral material, but based on the same five core components (two interpersonal and three intrapersonal): *social behavior* and *interpersonal feedback* are the two core interpersonal components of the model, while *self perception*, *identity standard*, and a *comparator* are the three intrapersonal components. Based on one’s social behavior, that individual receives interpersonal feedback from those around them, which is internally reflected upon by the individual and interpreted into meaning about who he/she is perceived to be within that social setting. This “perceived meaning” converts to self-perception (Kerpelman et al., 1997a, p. 328). This self-perception may or may not be congruent with one’s pre-conceived

identity standard, which embodies one's "self-definitions that comprise a particular identity" (p. 328). Therefore, the individual's self-perception in the given social context is compared with their identity standard via a comparator mechanism. When the two are incongruent with each other then a control mechanism is triggered to adjust one's social behavior aimed at restoring the self-perception to congruence with their identity standard. This new social behavior thus begins a new cycle of interpersonal feedback, proceeding with the continuous process of feedback and self-regulation.

Fundamental aspects of identity control theory have been further clarified and refined through a series of critiques and responses between the authors and other respected researchers in the identity field. Berzonsky (1997) offered a critique of the identity control theory model concerning its identity standards, expressing that the model appears to assume that these identity standards are both stable and clearly established. Given the constructivist foundation of Berzonsky's identity styles, it is clear to see his concern with Kerpelman et al.'s control theory including identity standards that may reflect the identity discovery view. In response, Kerpelman, Pittman, & Lamke (1997b) offer clarification that this "identity standard" in their model represents the individual's "best estimate" of who they are in that domain. A concern offered by Grotevant (1997) is whether control theory is comprehensive enough to address the larger process of identity formation. Kerpelman et al. (1997b) respond that their model does not address the larger process directly, but that it would fit well with macro-theories of identity formation that might emphasize stages of identity development. Finally, a concern is raised by Adams (1997) that control theory reflects a mechanistic approach to identity formation that is reductionistic, likening it to a psychodynamic view of identity formation. In response, the authors emphasize their embrace of an organismic perspective in identity control theory based on

individuals described by this model being active participants in their identity construction, and the incorporation of goals and organizational explanations of identity within the theory.

With a more comprehensive focus on identity formation, Grotevant's (1987) process model is complimented well by the micro-process model (control theory) offered by Kerpelman et al. (1997a). Together, these models provide practical and substantive theory for identity formation, from the contributing individual and contextual characteristics that influence the process, to the processing of these characteristics to receive feedback for regulating identity standards. A significant contribution of Grotevant's work included recognition of the influence that contextual characteristics have on identity formation. While Grotevant's work recognized these, identity capital theory (Côté, 1996, 1997) has provided the most in depth exploration of how larger social/cultural contexts influence this process.

Social/cultural context and identity formation.

Integrating psychological and sociological approaches to identity, Côté (1996, 1997) introduced the identity capital theory. From the psychological approach, identity capital utilizes Marcia's identity status paradigm, while from the sociological approach it utilizes the concept of individualization. *Individualization* is described as being an individual's process of developing a sense of self within the larger social/cultural context (Côté & Schwartz, 2002). This individualization process is said to occur in response to their social/cultural environment's engagement in restructuring or reorganization; "as a society undergoes a reorganization, people are increasingly left to their own devices in making major life decisions, including finding communities with which to establish integrative bonds on their own" (p. 573). As *late modern societies* place more and more responsibility on individuals for their own major life decisions, those individuals experience more pressures for achieving an expected successful and satisfying

life. These pressures are handled differently by each person, with many turning to “default options” made available by the society (generic, cultural trends in the society as a whole), and others’ more equipped to handle the individualization process adopting an agentic position and pursuing opportunities for growth and self-improvement of various sorts (Côté & Schwartz, 2002, p. 574).

According to identity capital theory, an individual’s identity status is dependent upon the amount of identity capital they have. Côté and Schwartz (2002) have provided some support for this assertion, finding significant associations between identity capital theory and the identity achievement and diffusion statuses. This identity capital reflects the resources available to that individual within their social/cultural context. These resources may be qualities of the individual that are “intangible”, or various forms of socially ascribed status that are more “tangible” (Côté, 1996, p. 426). Qualities of the individual might include cognitive and emotional strengths, self-esteem, and self-monitoring, while socially ascribed statuses might take the form of family social status, economic resources, and professional or educational credentials. While tangible resources are more useful in pre-modern and early-modern societies, intangible resources become increasingly more powerful within a late-modern society (such as that found in Western culture). The more identity capital one has the more likely they are to be able to engage in the exploration that characterizes a moratorium and leads to an achieved identity status. Individuals with less identity capital may default to identity commitments that are passed to them, exhibiting a foreclosed identity, or make no commitments and rather default to the larger social/cultural trends as characterized by identity diffusion.

The call for a structural understanding of identity formation.

Over the past 60 years considerable strides have been made in identity theory. Through Marcia's (1966) identity status paradigm, Erikson's original concept of identity was operationalized and pursued as a significant field of study. Since this time, Marcia's work has been expanded through extensions of his original constructs (dimensions, domains, and statuses), and complimented by a multitude of new identity theories. The significance of these previous works is evident, as they have provided the substantive content for a multifaceted understanding of identity. With such a rich understanding of identity through this content, it has been suggested by Kroger (2003a) that the field of identity research is primed to gain from an emphasis on the underlying structure of identity, and how this structure changes during the identity formation process.

In 2003(a), Jane Kroger expressed "the necessity of differentiating structure from content to enable a more refined understanding of ego identity status transition" (p. 216). In this work, Kroger asserts that changes in identity status reflects change in the underlying structure of ones identity, but not necessarily the content of that identity. She describes the underlying structure as "the filter through which one receives, retains, manipulates, and evaluates one's life experiences" (p. 209). A response article by van Hoof and Raaijmakers (2003) similarly speaks to this structure as having a regulatory function. Though recognizing and highlighting the importance of the structural components of identity, Kroger could not yet articulate what these structures were. In a response to her work, Berzonsky (2003) points out that "the major challenge...seems to be assessing the structural architecture of various identity components: How are they integrated, differentiated, and consolidated" (p. 241). A series of response articles followed Krogers (2003a) call for a structural understanding of identity (Berzonsky, 2003; Kroger, 2003b; Kunnen, &

Bosma, 2003; Levine, 2003; Snarey & Bell, 2003; van Hoof & Raaijmakers, 2003). The majority of these authors supported the idea of structure as relevant to identity formation, yet new structural understanding of the identity formation process has not yet been articulated.

A Structural Theory of Identity Development

[Identity may be construed] as a self-structure – an internal, self-constructed, dynamic organization of drives, abilities, beliefs, and individual history. The better developed this structure is, the more aware individuals appear to be of their own uniqueness and similarity to others and of their own strengths and weaknesses in making their way in the world. The less developed this structure is, the more confused individuals seem about their own distinctiveness from others and the more they have to rely on external sources to evaluate themselves. The identity structure is dynamic, not static. Elements are continually being added and discarded. Over a period of time, the entire gestalt may shift. Although the content of individual identities may be interesting, the most crucial area for study is the underlying process: the patterning of more or less disparate parts into a flexible unity. (Marcia, 1980, p. 159)

In 1976 Marcia expressed that “it may be productive to begin thinking of identity in terms of ongoing process or dimensions (rigid-flexible, open-closed)...” (p. 154).

Concerning these dimensions (rigid-flexible, open-closed), both Marcia’s identity statuses and Berzonsky’s identity styles have been described in terms of their rigidity and flexibility. In fact, similarities in their descriptions with regard to rigidity and flexibility correspond with the correlations between these constructs. The identity diffusion status and diffuse avoidant style correlate with one another and are both described by a lack of structure and excessive openness (flexibility) (Berzonsky, 1989; Schwartz, 2001). Identity foreclosure and a normative style

correlate with one another and are characterized by rigidity (Berman et al., 2001; Berzonsky, 1989, 1992a; Marcia, 1994b; Orlofsky et al., 1973; Schwartz, 2001). Lastly, identity achievement and an information style correlate with one another and are portrayed as balanced, with commitments that are flexible (Berman et al., 2001; Berzonsky, 1989; Schwartz, 2001). These descriptions of Marcia's identity achievement status and Berzonsky's information style reflect a midpoint or balance on the flexible-rigid continuum. The moratorium status is the only identity construct within these two theories that cannot be described in terms of rigidity or flexibility, rather its description focuses on the exploration process that so strongly characterizes it.

The dimensions of rigidity and flexibility that are used to describe identity statuses and styles point to another construct referred to as "boundaries" in Minuchin's (1974) structural family therapy. Boundaries have been alluded to throughout the identity literature from its inception (through terminology reflecting rigidity and flexibility). As a foundational construct of Minuchin's theory of structural family therapy, boundaries are loosely defined as "invisible barriers that regulate contact" (Nichols & Schwartz, 2004, p. 108). In this theory, boundaries are applied to relationships between individuals (such as a romantically involved couple), relationships between subsystems of the family (such as the parental subsystem and the child subsystem), and to the relationship between the familial system and larger outside systems (such as school, work, community, or society as a whole). A series of works by Perosa and colleagues has demonstrated a relationship between these boundary constructs within one's family system and his/her identity formation (Perosa & Perosa, 1993; Perosa et al., 1996, 2002). As important as the association between familial boundaries and identity formation is, this paper is not concerned with boundaries within the family and how they correlate with identity constructs.

Rather, it is geared toward utilizing the boundary concept for framing an individual's identity structure. Focusing on the identity development of individuals, further references to boundaries will pertain to boundaries constructed by individuals to regulate their contact with other systems (including other individuals, and larger social and cultural systems; but also includes ideological systems such as religious, political, and philosophical ideology). These might better be understood by what Hartman (1991) refers to as "boundaries in the mind" (p. 20), which are constructed by individuals' intellectual and emotional resources used for regulatory functioning.

The Role of Boundaries in Delineating Identity

Three types of boundaries are described by Minuchin (1974) in terms of how they regulate contact: Rigid, diffuse, and clear. *Rigid boundaries* might be described as solid, closed boundaries, which lack flexibility. Relationally, rigid boundaries manifest in disengaged relationships (limited contact and little emotional investment). *Diffuse boundaries* can be described by a lack of boundary; roles and responsibilities are blurred, resulting in scattered and disorganized relationships characterized by enmeshment. *Clear boundaries* represent a balancing point between rigid and diffuse boundaries. The boundary is clearly established, so the structure of the relationship is delineated well, yet it is also characterized by openness and flexibility, allowing for adjustments to unknown or difficult circumstances. With both clarity and flexibility contributing to the adaptability and resilience of the relationship, this clear boundary is considered the most desirable boundary type in Minuchin's theory of structural family therapy. While the boundary construct within structural family therapy is applied to relationships, there is a clear implication for individual's within those relationships; these boundaries also serve to define each individual within the relationship. Boundaries regulate contact between people by

distinguishing one from the other, and when distinctions are made, those entities being distinguished are further defined.

The relationship between these three boundary constructs (diffuse, clear, and rigid) and the identity status paradigm is evident in this quote by James Marcia (1976):

Openness, resilience, and flexibility have come to be seen as typical of Identity Achievement and Moratorium subjects; closedness, brittleness, and rigidity have characterized the Foreclosure individuals; fragmentation and scatteredness have become associated with Identity Diffusion. (p. 152-153)

As demonstrated in this quote, and earlier when discussing dimensions of rigidity and flexibility suggested by Marcia, the three boundary types described by Minuchin are easily seen in the defining characteristics of three of Marcia's identity statuses (identity diffusion, identity foreclosure, and identity achievement), as well as Berzonsky's (1989) identity styles (diffuse/avoidant style, normative style, and information style). The diffuse boundary type is seen to depict Marcia's identity diffusion and Berzonsky's diffuse/avoidant style, the rigid boundary type represents Marcia's identity foreclosure and Berzonsky's normative style, and the clear boundary type exhibits Marcia's identity achievement and Berzonsky's information style. A depiction of how these constructs relate to each other on a continuum of boundary types can be seen in figure 2. This figure shows the diffuse boundary type at one end of the continuum, with the clear boundary type in the middle and the rigid boundary at the far end, representing increasing solidification of boundaries. The identity diffusion status and diffuse/avoidant style can be seen to represent a diffuse boundary with which there is ambiguity concerning an individual's unique characteristics and differences within relational, social and cultural contexts

Figure 2. Structural Theory of Identity Development

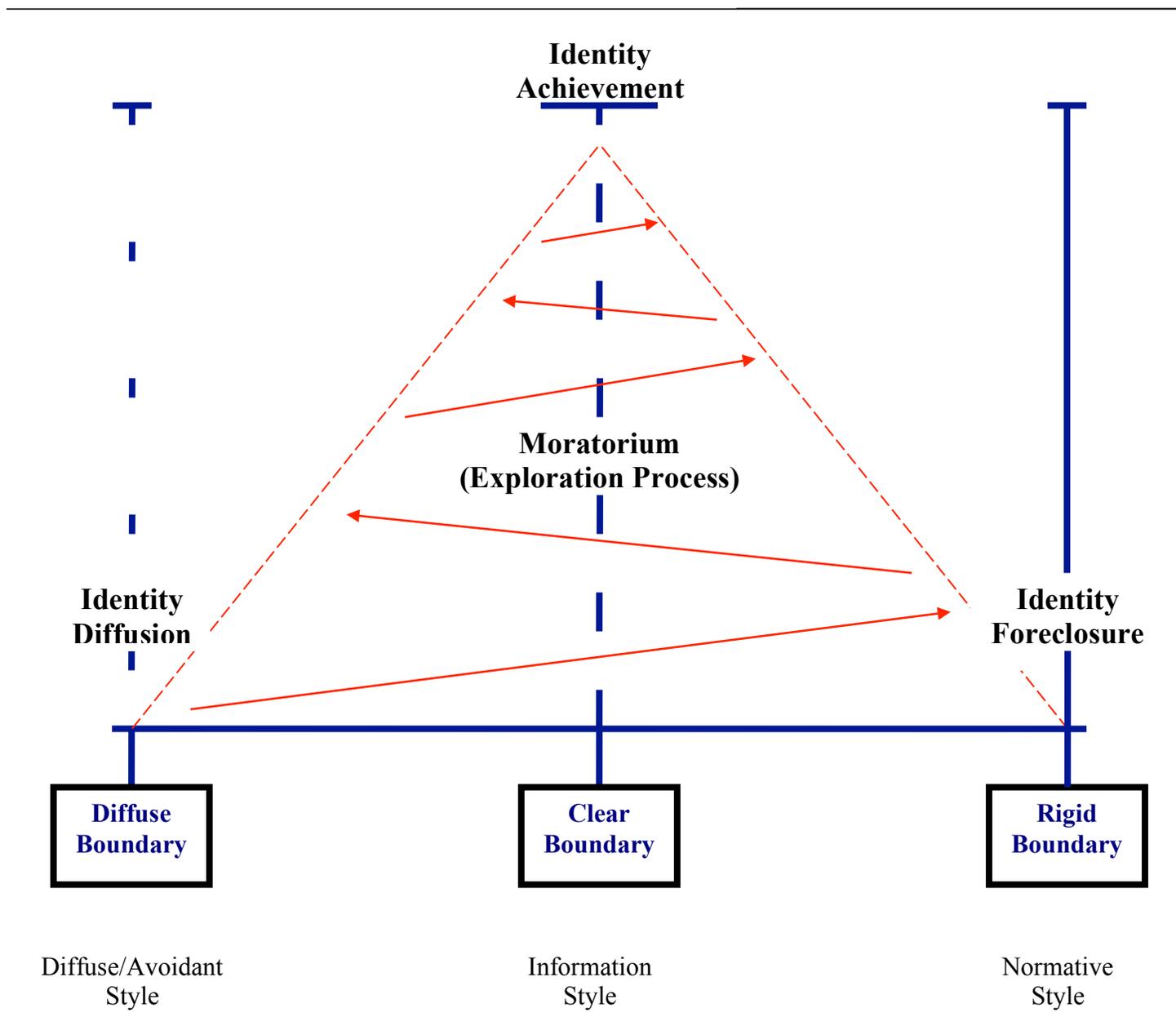


Figure 2. A graphic illustrating both the relationships among identity constructs and the identity formation process in terms of boundaries. The diffuse boundary is illustrated on the left by a well-spaced, vertical dotted line; the identity diffusion status and diffuse/avoidant style are aligned with it along the horizontal boundary continuum. The clear boundary is illustrated in the middle of the figure by an evenly spaced vertical dotted line; the identity achievement status and information style are aligned with it along the horizontal boundary continuum. The rigid boundary is illustrated by a solid vertical line on the right of the figure; the identity foreclosure status and normative style are aligned with it along the horizontal boundary continuum. Exploration experienced during identity moratorium is illustrated by the triangular figure and arrows, showing a reiterative process of rigidifying and flexing ones boundary as he/she seeks to establish a clear boundary that effectively frames ones identity commitments while maintaining flexibility in those commitments. Each iteration in this process draws closer to the clear boundary sought. The identity achievement status is at the top of the triangle representing a relative achievement of that clear boundary which delineates ones identity.

(Berzonsky, 1992a; Kroger, 1993; Marcia, 1993b; Perosa et al., 2002; Raskin & Waterman, 1994). Schwartz (2001) describes the identity diffusion status by “a lack of any sort of basic identity structure that might hold the person together and afford him or her a solid basis for making choices and following a consistent life path” (p. 13). Without a well established boundary to structure one’s identity and differentiate him/her from outside systems, identity diffusion individuals tend to lack autonomy (Berzonsky & Kuk, 2000, Marcia, 1980), be overly affected by external circumstances (Marcia, 1994b; Schwartz, Mullis, & Dunham, 1998), are vulnerable to social manipulation and conform to others around them (Berzonsky & Ferrari, 2009; Marcia, 1967, 1994b; Toder & Marcia, 1973), and struggle in familial and intimate interpersonal relationships (Adams & Archer, 1994; Berzonsky & Kuk, 2000; Marcia, 1976, 1980, 1994b; Orlofsky et al., 1973; Perosa et al., 1996, 2002; Raskin & Waterman, 1994; Schwartz, 2001). This diffuse boundary lacks form because the identity diffusion individual has not made commitments. If an identity diffusion individual either explored options for commitment or made a commitment, the boundary that regulates his/her contact with outside systems would begin providing structure for his/her identity.

Identity foreclosure status and the normative style on the other hand can be seen to exemplify a rigid boundary. This rigid boundary is clearly seen in descriptions of identity foreclosed individuals utilizing a normative style as rigid and resistant to change (Berman et al., 2001; Berzonsky, 1989, 1992a; Marcia, 1976, 1980; Orlofsky et al., 1973; Patterson et al., 1992; Schwartz, 2001), close minded (Berzonsky, 1989, 1992a, 1993; Marcia 1994b), focused and inflexible (Berman et al., 2001; Berzonsky, 1992a; Marcia, 1967, 1994b), and authoritarian in their value system (Berzonsky, 1989; Marcia, 1966, 1967, 1980, 1994a, 1994b; Marcia & Friedman, 1970; Schenkel and Marica, 1972). Having made commitments without undergoing

the exploration process, individuals in identity foreclosure with a normative style have low emotional capacity to handle the ambiguity of questioning those things they have committed to (Berzonsky, 1993; Marcia, 1994a), resulting in an identity that is frail when subject to external pressure (Marcia, 1994a, 1994b; Schwartz, 2001). In these circumstances a rigid boundary serves to protect the individual from external pressures by cutting them off from contact all together.

Identity achievement and informational style individuals reflect a clear boundary that is evidenced by balance and the flexible commitments that characterize them (Berman et al., 2001; Berzonsky, 1989; Boyes & Chandler, 1992; Marcia, 1967; Schwartz, 2001). This clear boundary offers the clarity of identity found in identity achievers' tendency toward autonomy and resilience under stress and social manipulation (Berzonsky, 1992a; Berzonsky & Kuk, 2000; Marcia, 1966, 1967, 1980), an integrated personality (Bourne, 1978b; LaVoie, 1976), and sense of purpose (Côté & Levine, 1983). It also offers the flexibility found in identity achievers' reflexivity (Waterman & Waterman, 1974) and ability to generate alternatives when making decisions (Berman et al., 2001; Boyes & Chandler, 1992). In effectively maintaining the balance between clarity and flexibility found in a clear boundary, it is consistent that identity achievers are additionally described with high maturity (Berzonsky & Kuk, 2000; Côté & Schwartz, 2002), moral reasoning (Marcia, 1980; Podd, 1972; Rowe & Marcia, 1980), secure attachments (Årseth et al., 2009; Zimmerman & Becker-Stoll, 2002), and the capacity for strong familial and intimate interpersonal relationships (Craig-Bray et al., 1988; Marcia, 1976, 1980; Orlofsky et al., 1973; Perosa & Perosa, 1993; Perosa et al., 1996, 2002).

The Process of Exploration During the Moratorium Status

Adolescents, to be sure, do undergo a separation-individuation process on the road to identity. But at the same time, they are not becoming "lone selves" needing no one,

standing to face the forces of life alone. Rather, they are editing and modifying, enriching and extending their connections to others, becoming more fully themselves in relation.

Individuation is reinvested in revised relatedness, and in these commitments lies the integration of identity. (Josselson, 1994, p. 83)

Kroger (2003b) expresses that “any structure underlying the moratorium status is likely to be one in transition” (p. 294). So, considering the boundary (or structural) formation as a process in itself, and additionally considering exploration as a process through which one navigates their identity formation, it follows that an integral aspect of the exploration process involves the formulation of boundaries that serve to both provide structure to ones identity and differentiate them from external systems.

This process of exploration reflects a struggle to establish a clear boundary, which delineates identity from outside systems. Exploration of potential commitments for integration within the identity structure keeps that boundary in constant fluctuation. For those in this exploration process, the very act of considering an idea or concept for commitment relaxes the boundary structure that has been holding potential commitments outside. As time and energy are invested into considering this potential commitment, the boundary differentiating individuals’ self-concept from the potential commitment becomes more diffuse. Similar to a dam regulating the intensity of water flow, the boundary structure regulates the intensity of a potential commitment’s flow into the identity structure. The more diffuse the boundary structure becomes, the greater tendency there is for the potential commitment to flood the identity structure, overwhelming (or threatening) the cohesive self-concept. When this occurs individuals’ experience a sense of losing themselves. This is because the diffuse boundary lacks the filtering or regulatory function that a boundary performs. When individuals recognize this “threat” to

their identity, rigidifying of the boundary structure is triggered in order to strengthen regulatory functions, and allow for a focus on re-establishing the sense of self.

The process of boundary formation described above can be understood as having two components: An integration component, and a synthesis component. The process of *integration* refers to the boundary structure becoming more diffuse in order to integrate a new commitment. The solidification of ones boundary structure marks a shift in focus to identity *synthesis*. This is a time when the new potential commitment is externalized so the individual can synthesize their identity once again, making it a distinct and cohesive unit. During identity synthesis, aspects of the potential commitment may continue to be considered, influencing the re-organization of the identity, yet they are considered hypothetically (which is safer for one's identity). Such re-organization of the identity prepares it for incorporating the potential commitment more smoothly during future integration cycles. Re-iterations of the integration/synthesis process continue as long as new potential commitments are considered and/or new information about already established commitments is acquired (Grotevant, 1992).

Early in the exploration process, boundary structures fluctuate at greater extremes, from highly diffuse to highly rigid, reflecting an over corrective tendency. This occurs because individuals' are not yet able to recognize a clear boundary structure that delineates identity; all they can recognize is the presence or absence of a boundary that protects the identity. Yet as re-iterations of the integration/synthesis (exploration) process continues, those individuals learn to regulate their identity structure more efficiently. They eventually learn to regulate their identity structure with a clear boundary, which allows the integration and synthesis processes to occur almost simultaneously. That is, new potential commitments can be considered at a rate and intensity level that the self-concept can handle and accommodate. Eventually this

integration/synthesis process shifts from a primary function in identity formation to one of identity maintenance. This shift in the integration/synthesis process to a maintenance function is the transition from the moratorium status to identity achievement.

While transition to identity achievement and maintenance is relatively stable, it is not necessarily a permanent transition (Marcia, 1994a). New potential commitments of significance, or intense external events can cause one in identity achievement to question their commitments (recycling back into moratorium), or restructure their commitments to accommodate additional commitments. This is seen in Marcia's (2001) example of a 30 year old woman previously identified within the identity achievement status but then found to be questioning some aspects of her identity:

If one interviews her as the old identity is being disequilibrated, one might find her to be diffused or moratorium (or even revisiting some foreclosure content). Is this temporary diffusion less developmentally advanced than her previous achievement? I think not. To understand the developmental significance of an identity status beyond late adolescence, one must understand where the individual has come from and where he or she is going. After the initial identity, one enters an identity reformulation cycle. That is what we have referred to as MAMA (Moratorium-Achievement-Moratorium-Achievement) cycles. (p. 62)

Figure 2 shows a structural and process-oriented model of identity development framed by the *boundary* construct. In this model we can still see the application of the original developmental sequence suggested by Marcia (1966), with exploration during the moratorium status being the means by which one reaches identity achievement. However, rather than being a linear progression from identity diffusion to moratorium to identity achievement, this model

shows exploration during moratorium to involve continuous iterations of the integration/synthesis process, through the solidifying and flexing of boundaries associated with both the identity diffusion and identity foreclosure statuses. With this model we can see both why “the research literature on identity formation suggests that adolescents move in and out of the various statuses throughout adolescence and into adulthood” (Grotevant, 1986, p. 176), and how this movement between statuses occurs. It illustrates something similar to what Marcia (2001) expressed when saying “that identity gets built out of successive reiterations of this process” of struggling with exploration and commitment as opposing dimensions (p. 63).

Relating other Identity Theories to the Structural Theory of Identity Development

The relationship that the structural theory of identity development has with Marcia’s identity status paradigm and Berzonsky’s identity styles has been articulated thus far. What has not yet been established is how other theories of identity inform the structural theory. Following are brief descriptions of how the structural theory incorporates many of the construct extensions (dimensions, domains, and statuses), and is further informed by complimentary theory extensions addressed in the literature review.

Relating structural theory to previous construct extensions.

Marcia’s identity status paradigm investigated two dimensions (exploration and commitment) within three domains (career, political ideology, and religious ideology) in order to determine individuals’ placement within one of four identity statuses (identity achievement, moratorium, identity foreclosure, and identity diffusion). Previous identity research has expanded Marcia’s work in each of these arenas. The structural theory addresses and affirms these expansions in each of the arena’s (dimensions, domains, and statuses). Three dimensions are suggested by the structural theory of identity formation. This theory preserves Marcia’s

dimension of commitment while suggesting that his exploration dimension be broken down into two sub-dimensions: integration and synthesis. The suggested expansion of Marcia's domains to include interpersonal and social contextual domains is affirmed by the structural theory's reliance upon a "boundary" structure. At its core, the boundary concept has its roots in family systems theory, strongly suggesting that identity statuses and styles that parallel different boundary structures would likewise exemplify different relational patterns.

The primary critique of Marcia's identity statuses is that they represent forced categories. Based on this critique numerous sub-statuses were suggested in order to bridge the gap between these statuses, particularly identity diffusion and identity foreclosure. The boundary continuum within the structural model provides a framework with which we can understand how these statuses relate to one another and differ from one another. It is easy to see how both the identity diffusion and foreclosure statuses are distinguished between *firm* placement within the statuses (existing at either extreme of the boundary continuum) and *developmental* placement within them (falling closer to the middle of the continuum) as mentioned by Archer and Waterman (1990). In fact, this distinction is critical to recognizing another aspect of structural theory. Wherever an individual falls on the boundary continuum when entering a period of identity development reflects how much exploration they may tend to engage in. The further one is toward either extreme of the boundary continuum, the less exploration they will tend to undergo. This is because the further out on either extreme one falls on the continuum, the less equipped they are to discern a clear boundary. As such, the exploration process involves such extreme oscillations from diffuse to rigid boundaries, that it is too overwhelming for them to engage in. Therefore, they will tend to remain firmly established in their identity status or style.

In contrast to those on either extreme of the boundary continuum, the closer one is to the middle of the continuum when entering an identity development period, the more exploration they are likely to engage in. Those in the developmental diffusion and foreclosure statuses may engage in some exploration, thus experiencing a short moratorium, but then abandon this process before reaching identity achievement for reasons sited above; returning to their “particular style” or status, as suggested by Berzonsky. They may also engage in this exploration in surges, returning to their “particular style” or status for periods of time along the way. In this later case, those in developmental diffusion and foreclosure statuses may reach identity achievement, but the process takes an extended period of time in comparison to those who undergo a more continuous exploration process. Those entering an identity development period even closer to the middle of the continuum will be more likely to engage in full exploration that results in identity achievement, because they are closer to discerning a clear boundary from the start, thus experiencing more manageable oscillations. While their exploration undergoes the same differentiating process, in relation to others, their moratorium experience is far less intense than those experienced by someone beginning the process at an extreme on the boundary continuum. This begs the question, “what determines where one begins on the boundary continuum when entering a period of identity development?” One answer to this question is the primary identity style that the individual employs (diffuse/avoidant, informational, normative). Those utilizing the informational style will tend toward the middle of the boundary continuum, while the diffuse/avoidant and normative styles would represent either extreme of the continuum. This question will be further addressed in how structural theory relates to the complimentary theory extensions below.

Relating structural theory to previous complimentary theories.

Factors determining placement on the boundary continuum.

As mentioned in the previous section, a question that comes up with structural theory is, “what determines one’s starting point on the boundary continuum when entering a period of identity development?” This question is addressed by both Côté’s (1996, 1997) identity capital theory, and aspects of Grotevant’s (1987) process model. Côté’s work articulates the role of larger social and cultural influences on this starting point, while Grotevant’s work addresses both individual characteristics and other contextual factors on this issue. Together, these theories provide a thorough description of those factors influencing ones starting point on the boundary continuum as they enter a period of identity development.

It would be reasonable to consider Côté’s (1996, 1997) identity capital theory as informing structural theory with regard to an individuals capacity for exploration. As already established, the closer to a clear boundary individuals’ are, the greater their capacity for engagement in ongoing exploration. Likewise, as they move further away from the clear boundary toward either extreme on the boundary continuum (diffuse or rigid), their capacity for engaging in ongoing exploration diminishes. In this light, the more identity capital held, the more capacity individuals’ have for engaging in exploration (reflecting a clear boundary), and with less identity capital is less capacity for engaging in this exploration. This would mean that identity capital informs how close to, or distant from, the clear boundary individuals’ are without necessarily addressing which side of the clear boundary they are on. This is because their identity capital has to do with the value of their tangible and intangible resources *in their social context*, not what those resources are specifically. This is at least initially consistent with the findings of

Côté and Schwartz's (2002), who found significant associations between high identity capital and the identity achievement status (which reflects a clear boundary).

Grotevant's (1987) work also informs structural theory with regard to capacity for exploration. His model demonstrates that "orientation to engage in exploration" is contingent upon individual characteristics and contexts of development (p. 205). These characteristics and contexts would therefore be factors that account for initial relation to a clear boundary along the boundary continuum. In this way, Grotevant's work informs structural theory similarly to Côté's work. However, since individual characteristics and contexts of development can be more specifically associated with identity statuses and styles than ones identity capital, they are also able to inform which side of the boundary continuum an individual would fall (more diffuse or more rigid).

An additional component of Grotevant's (1987) process model is helpful in determining an individual's initial point on the boundary continuum. His model demonstrates that in addition to identity characteristics and contexts of development, engagement in exploration is influenced by the *interdependencies between different identity domains*. This point seems particularly salient when making sense of it within the structural theory. As one learns to discern a clear boundary for a potential commitment in the integration/synthesis process, he/she is able to transfer this skill into other domains. This means that someone who has engaged in significant exploration in a previous domain is likely to utilize what they learned in the exploration of new domains, thus starting the process closer to the middle of the boundary continuum than previously.

The consideration of both Côté's identity capital theory and Grotevant's (1987) process model is very helpful in understanding those factors that influence one's initial placement along

the boundary continuum. The identity capital theory informs understanding of how larger social and cultural contexts influence one's capacity for exploration, while Grotevant's process model clarifies the influence of individual characteristics, contexts of development, and the interdependence between identity domains on one's capacity for exploration and/or approach to avoiding exploration. Together these two theories provide a fairly comprehensive understanding of the factors influencing one's placement along the boundary continuum.

Discovery/constructivist theories and structural theory.

As articulated in Schwartz's (2002) individualization process model, both Waterman's (1984) discovery and Berzonsky's (1989) constructivist views of identity development may reflect distinct aspects of the same process. According to Schwartz, Waterman's discovery view reflects internal levels of Erikson's (1968) identity concept, while Berzonsky's constructivist view reflects external levels of this construct. Making sense of this within the structural model, the integration phase of exploration would represent an external focus, an active working towards self-construction; the identity synthesis phase of exploration would represent an internal focus, a time of re-discovering oneself, or re-aligning oneself with one's daimon. While Schwartz (2002) expressed that it is possible for identity achievement to be reached through *self-construction* alone (without experiencing *emergent discovery*), the structural model suggests that re-iterations of internal and external emphases are necessary to reach an achieved identity.

Cybernetics and the integration/synthesis processes.

Kerpelman et al. (1997a) provided identity control theory as a micro-process theory of identity formation that is grounded in cybernetics. With this theory grounded in cybernetics, it is useful to define the term. Keeney (1983) offers this definition: "cybernetics is the world of recursive process" (p. 48). The control theory model reflects a negative feedback loop

“monitoring the congruence between inputs and internal standards” (Keeney, 1983, p. 330). In this model, “when the [identity] standard and self-perception are incongruent, an error/disturbance results that leads...to the enactment of *behavior* aimed at restoring the predisrupted identity” (p. 329). While identity control theory focuses on the feedback loop in cybernetic theory to inform identity related processes, structural theory reflects the *recursive process* of these feedback loops during the exploration process (Keeney, 1983, Wiener, 1961). Keeney highlights these iterative patterns of feedback in cybernetic theory by expressing:

...feedback control may lead to clumsy behavior if the feedback is inadequately structured. For example, when an individual with ataxia is offered a cigarette he will swing his hand past it in an effort to pick it up. He will then swing past it again and again until his motion becomes a violent oscillation. Similarly, a poorly designed thermostat system may send the temperature of a house into wild oscillations. In the case of an automobile’s steering system, too much ‘lag’ or slowness of response will result in the car weaving in and out of the lane. Since it takes too long for the wheels to move when the driver turns the steering wheel, he responds by turning it even more. By the time the effects of his steering change the direction of the car, he will have steered it too far in one direction. This will consequently result in a similar sequence of oversteering in the other direction. In this feedback loop, the corrective behaviors of the system appear to overshoot and result in escalating oscillations. (p. 68)

These oscillations can be seen in the integration/synthesis cycles involved in the exploration process of structural theory. When individuals’ begin the exploration process, they tend to be clumsy in their articulation of a clear boundary that structures identity, resulting in overcorrection and the oscillations described by Keeney. However, humans are complex systems

that learn from these experiences; meaning that with each iteration of this feedback “the information which proceeds backward from the performance is able to change the general method and pattern of performance” (Wiener, 1954, p. 61). Thus, as individuals’ continue in the exploration process, these oscillations begin to wane, and a more clear boundary forms. As previously stated, the recursive nature of this exploration process never changes (even for those in identity achievement), though learning greatly improves these oscillations by making the integration/synthesis processes more efficient. In this manner, the structural model is deeply interconnected with identity control theory.

A graphic illustrating the recursive feedback loops in their oscillating fashion can be seen in figure 3. This expands on the single feedback loop described by Kerpelman et al. (1997a) by adding a second feedback loop to illustrate the oscillations in boundary structure during the identity formation process. Patterns of movement through this cybernetic model operate in the fashion of a figure 8; that is, one passes from one side of the figure 8 model, through the comparator mechanism (which compares the self-perception with the identity standard) in the middle of the figure 8, to the other side of the model. The importance of these recursive feedback loops can be found in Berzonsky’s (1997) critique of Kerpelman et al.’s (1997a) single feedback loop model, and then subsequently in Kerpelman et al.’s (1997b) response to this critique. Berzonsky was concerned that the micro-process model appeared to assume a clear and already established identity standard, to which the authors replied that this identity standard actually represents the individual’s “best estimate” of who they are in that domain. This “best estimate” speaks to an inherent ambiguity about one’s identity standard, especially during the exploration process. Without a well articulated identity structure early in the exploration process, the identity standard is basically absent; making it very difficult to

Figure 3: The Role of Cybernetics in Boundary Formation

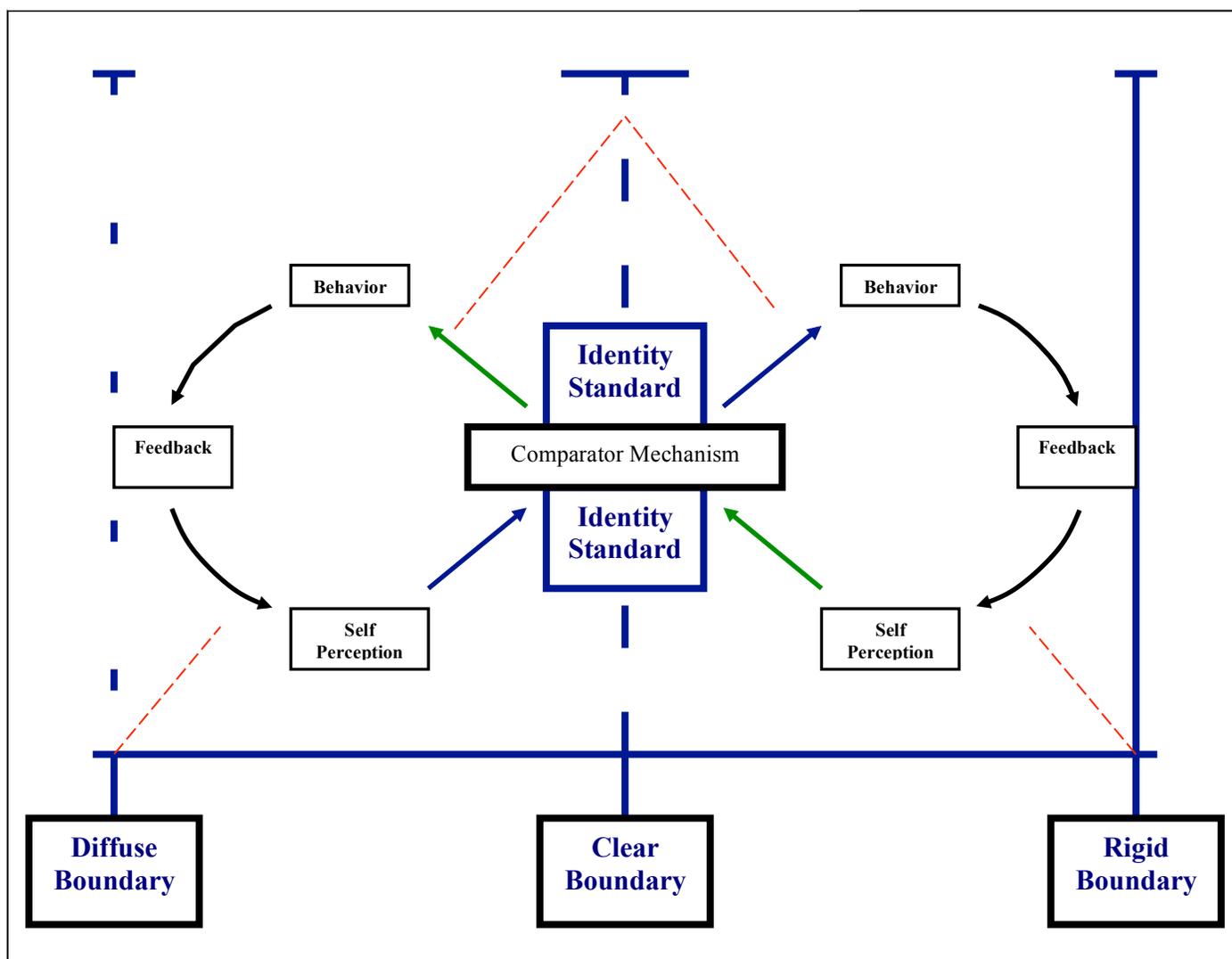


Figure 3. Graphic illustrating a cybernetic understanding of the formation of boundaries that delineate identity. Rather than a single feedback loop, as represented in the work of Kerpelman et al. (1997), this graphic has two interconnected feedback loops to illustrate the oscillations that occur during the boundary formation process. These oscillations result from the ambiguity concerning a clear boundary structure that delineates identity. Since a clear boundary is not yet constructed or recognized during the exploration process, there is a lag in the feedback process that results in overcorrection, which subsequently results in overcorrection in the opposite direction and so on. To describe this process, we will begin with the feedback loop on the right side of the graphic (closest to the rigid boundary). At the top of this loop, we have individuals' *behavior*. Since it is on the rigid side of the boundary continuum, this behavior reflects action towards rigidifying the boundary that delineates identity (identity synthesis). This behavior produces *feedback* that might be interpersonal (as Kerpelman et al. express), or it can be intrapersonal (such as the sense of internal identity conflicts that require additional information to overcome). This feedback results in *self-perception* that is compared with the *identity standard* via a *comparator mechanism*. However, since the identity standard is not yet clearly established individuals' are unable to accurately correct the behavior to reflect this identity standard. Consequently, over-corrective *behavior* results; reflected now on the left (diffuse) side of the boundary continuum. This behavior now reflects an overly diffuse boundary purposed for integrating new potential identity information. This diffuse boundary behavior results in *feedback* that again may be interpersonal or intrapersonal (such as feeling overwhelmed by the flood of identity possibilities and the loss of a sense of self). This feedback produces a *self-perception*, which is again compared with the obscure *identity standard* via the *comparator mechanism*. The lack of clarity concerning the identity standard results in subsequent oscillations. Yet, each iteration of this process further clarifies the identity standard, resulting in more accurate and therefore efficient feedback.

recognize the incongruence between one's self-perception and identity standard. This results in a "lag" in the feedback, as described by Keeney (1983), and subsequent overcorrections in the oscillating fashion previously described. Yet each iteration of the process provides indirect (process oriented) feedback to the individual in exploration, which assists them in clarifying their identity standard. As their identity standard becomes more clear, the incongruence between self-perception and identity standard is recognized quicker, resulting in less 'lag' and more efficient corrective behaviors.

Summary

This structural theory of identity formation is understood best within the context of previously established identity literature. Marcia's identity statuses and Berzonsky's identity styles are constructs that directly inform the structural theory as a whole, while other identity theories inform specific aspects or processes of the theory. Unique to this structural theory is the boundary construct, which provides the framework of the theory itself. Prior to this study, the boundary construct had not been directly utilized in identity literature (as used for an individual), its interactions with Marcia's identity statuses and Berzonsky's identity styles were explored in this study.

Chapter 3

Methodology

The purpose of this study was to examine differences in boundary scores for the four identity statuses, and the three identity styles. Participants for the study were recruited from the Virginia Tech undergraduate student body in four courses (Professional Seminar within the College of Liberal Arts and Human Sciences, Travel and Tourism Management, General Chemistry, and Human Development 1). A survey was used that combined a demographic questionnaire developed by this author, the boundary questionnaire-18 (Kunzendorf, Hartman, Cohen, & Cutler, 1997) to measure boundary thickness, the EOM-EIS-revised (Bennion & Adams, 1986) to determine identity status, and the ISI3 (Berzonsky, 1992c) to determine identity style. Because this study was intended to examine differences among multiple identity statuses (four) and styles (three), a two-way analysis of variance was used. The following questions were asked.

Research Questions

1. Does identity status effect boundary scores?
2. Does identity style effect boundary scores?
3. Does identity status depend on identity style?

These questions were explored utilizing the following analysis:

Analysis: 2-way ANOVA
Independent variable: Identity status and identity style
Dependent variable: Boundary score

Where this analysis yielded significant differences among the statuses, styles, or the simple main effects of the interaction, the researcher conducted tukey's post-hoc analysis to identify specific differences.

Participants

Participants for this study were undergraduate college students between 18 and 24 years of age. A convenience sample of students at Virginia Tech were acquired through select courses being offered. The researcher made contact with professors teaching courses in which a large number of undergraduate students were enrolled (at or above 50 for each course). In making contact with these professors, the researcher explained the study and asked that they consider one of two options: 1) Offer students extra credit for participating in the study, or 2) Allow the researcher time in a class to administer the study to consenting students. The survey was available online using Qualtrics software for students to access through a link that took them to the informed consent page and then on to the survey. When given the opportunity to visit a class, the researcher administered the survey in paper format.

In order to determine the number of participants needed for this study, power calculations were run for a two-way analysis of variance for both the identity statuses and the identity styles. Based on a medium effect size for the study, power calculations for the identity statuses (4 groups) revealed the need for 46 participants per group. This equated to 184 total participants, if the participants were distributed evenly among the statuses (46 participants in each of 4 groups). Also based on a medium effect size, power calculations for running an analysis of variance for the identity styles (3 groups) revealed the need for 52 participants per group. This equated to a total of 156 participants if they were distributed evenly among the styles (52 participants in each of 3 groups). Since the total participant number for the identity status part of this study was largest, the target number of participants for this study was based on it. It was not anticipated that participants would be distributed evenly among the statuses in this study, so this researcher

targeted a larger sample than the 184 participants necessary to ensure meaningful analyses. For this reason, the target sample for the study was 300 participants.

Measures

Participants completed a demographic questionnaire designed by the author, the Boundary Questionnaire-18 (Kunzendorf et al., 1997) for boundary thickness, the EOM-EIS revised (Bennion & Adams, 1986) for identity status, and the ISI3 (Berzonsky, 1992c) for identity style, with a total of 129 items. Completion of the entire survey was estimated to take 20-30 minutes. None of these measures required permission for use, though Berzonsky (1989) requested to be informed of studies in which the ISI3 was used. This author informed Michael Berzonsky (1989) of the use of the ISI3 by email upon receiving approval for this study from the committee. These measures were combined into one web-based survey using Qualtrics software. Links to the survey were provided to the instructors who agreed to participate in an online format, who passed them on to the students in their classes. For those classes that the researcher visited in person, the survey was administered in paper format. This mixed-mode survey approach was intended to increase response rates and decrease coverage bias, though it likely increased response error (de Leeuw, 2005).

Demographic questionnaire.

The demographic questionnaire (Appendix A) gathered information helpful to the author for describing the participants of this study. This information included age, gender, race/ethnicity, year in school, major, and international living experience. The last piece of demographic information (international living experience) was not used in this study, but related to other identity research interests of the researcher.

The boundary questionnaire-18.

The boundary questionnaire-18 (BQ-18) is a shortened version of Hartman's (1991) boundary questionnaire. The original version of this questionnaire consists of 145 items across 12 domains: 1) Sleep/wake/dream; 2) Unusual experiences; 3) Thoughts, feelings, and moods; 4) Childhood, adolescence, and adulthood; 5) Interpersonal; 6) Sensitivity; 7) Neat, exact, and precise; 8) Edges, lines, and clothing; 9) Opinions about children and others; 10) Opinions about organizations and relationships; 11) Opinions about peoples, nations, and groups; and 12) Opinions about beauty and truth. These items yield a score that reflects placement along a thin/thick boundary continuum. This original measure has an alpha reliability of .93, and a test-retest reliability of .77 (Hartman, 1991). With 145 items, the length of the original boundary questionnaire presented a problem for response rates and acquiring the appropriate number of participants needed in this study. For this reason the researcher used the BQ-18, a shortened version of the original boundary questionnaire. The BQ-18 (Kunzendorf et al., 1997) found in appendix B, consists of 18 items representing each of the 12 domains in the original boundary questionnaire. Like the original measure, it yields a score that reflects placement along a thin/thick boundary continuum. Each question is on a likert scale ranging from 0 to 4: 0 indicating "not at all" and 4 indicating "very much so" (Houran, Thalbourne, & Hartman, 2003), yielding a range of total scores from 0 to 72. The majority of the items are worded with 4 as thinnest and 0 as thickest; while four of the items are reversed coded, with 4 as the thickest and 0 as the thinnest. Higher overall scores on the measure indicate thin boundaries, while lower overall scores indicate thick boundaries. Original testing of the BQ-18 demonstrated a positive correlation with the original 145-item boundary questionnaire ($r = .87$) in terms of their total scores. Each item on the BQ-18 also correlated positively with total scores on the original

version (mean $r = .36$, $SD = .09$). This measure has been used for measuring boundary differences among college students (Kunzendorf et al., 1997), and was therefore an appropriate measure to use with the college student population in this study.

Extended objective measure of ego-identity status (revised).

The revised EOM-EIS (Bennion & Adams, 1986) found in appendix C, computes four identity status scores (identity achievement, moratorium, identity diffusion, and identity foreclosure) based on participant responses to 64 items. The measure is regularly used with college student populations (Bennion & Adams, 1986; Schwartz & Dunham, 2000; Waterman, 2007), and items are on a six point, likert scale from A to F, with A indicating “strongly agree” and F indicating “strongly disagree”. These 64 items measure identity status based on four ideological domains (occupation, religion, politics, and recreation), and four interpersonal domains (sex roles, dating, friendship, and recreation). Alpha reliability is above .58 for each domain, with three of the eight domains at .75 or higher (Bennion & Adams, 1986). Pearson’s correlation for convergence between ideological and interpersonal domains on the EOM-EIS was at .46.

Determining a specific status type for each participant was accomplished in this study by following Adams, Shea, and Fitch’s (1979) protocol established for the original objective measure of ego identity status (OM-EIS). This protocol involves calculating the mean and standard deviation of scores for each status across domains. Then each participant’s score for each status is compared based on the following criteria:

1. Individuals with scores falling one standard deviation above the mean on a given scale [are] scored as being in that identity status if all remaining scores [fall] below that cutoff.

2. Individuals with scores falling less than 1 standard deviation above the mean on all four measures [are] scored as moratorium (while arbitrarily decided, such a low profile [is] assumed to reflect a unique form of crisis).
3. Individuals with more than one score above the standard deviation cutoff [are] scored as persons in transition and given a “transition stage” typology, e.g., diffusion-moratorium, diffusion-foreclosure, etc. (Adams et al., 1979, p. 227)

For the purposes of this study, only the boundary scores of those participants yielding a single identity status were considered. By only considering the boundary scores of those participants with a single identity status, clearer distinctions among the boundary scores for each status were expected. This decision reduced the number of participants that could be used in the analysis, which was anticipated from previous studies by Adams et al. that found between 15 and 21 % of cases within one of the transition groups. By assuming that 21% of the targeted 300 participants for this study would fall within one of the transition groups, it was determined that 63 participant scores would not be analyzed. Because 184 participants were desirable for analysis, this left an excess of 53 participants on this scale, which this researcher deemed reasonable. Since some unusable data was expected, the data gathered from these excess participants was expected to help ensure a sufficient amount of data for meaningful analysis.

Identity style inventory (revised).

The identity style inventory (Berzonsky, 1992c) found in appendix D, yields scores for participants in three identity style domains (diffuse/avoidant style, information style, normative style) and a commitment domain. This measure is often used with college student populations (Berzonsky, 1992b; Berzonsky & Luyckx, 2008; Schwartz et al., 2000), which made it an appropriate measure for the sample population in this study. It is based on participant responses

to 40 items, which are on five point likert scales, with 1 indicating “not like me at all” and 5 indicating “very much like me” (Berzonsky, 1992c). Test-retest reliability for each domain of the inventory are above .83, while alpha coefficients for each domain are above .64.

In order to determine each participant’s primary identity style for this study, the researcher followed steps taken by Berzonsky (1992a, 1992b), where “raw scores on the three style scales were transformed into standardized z scores, with means of 0 and standard deviations of 1. Then, a subject’s highest standard score on the three style subscales was used to designate her [or his] *identity style*” (Berzonsky & Sullivan, 1992, p. 148).

Data Collection

Once permission was granted by the Institutional Review Board at Virginia Tech, data for this project was collected through both an online survey format using Qualtrics software and a paper format. The format for administration was recorded in order to test for differences in results during data analysis. Each of the instruments mentioned above was combined into one survey for a total of 129 items. The researcher provided a link to the survey and a brief written description of the study (appendix E) to the instructors of classes participating online, which they made available to their students. This link took them first to the informed consent page, and then on to the survey itself. For cases in which the researcher visited a class and administered the survey personally, he read the description of the study out loud while paper formats of the survey were passed out to students. The first page of the survey was the informed consent, and the survey itself began on the second page of the packet. As an expression of gratitude for participating in the study, participants had the opportunity to be entered into a lottery in order to win a \$50 gift card to Kroger grocery store (Porter & Whitcomb, 2004). A drawing was conducted for each course in which the survey was administered. Participants who completed the

survey online had the opportunity to provide an email address at the end of the survey to be entered. Participants who took the survey in paper format had the opportunity to win a drawing in class before returning their surveys. Each paper survey had an individual number on the first page of the survey that was used for the drawing.

Data Analyses

Analyses of the data occurred in three distinct stages. In the first stage the differences in boundary scores for the four identity statuses were investigated; in the second stage the differences in boundary scores for the three identity styles were examined; in the third stage the interactional effects between identity status and identity style were explored. To address the research questions for each identity construct (status, style), differences in boundary scores and the interaction between identity constructs were examined with a two-way analysis of variance (ANOVA). In this analysis, the identity constructs (identity status, identity style) served as the independent variables and the boundary score served as the dependent variable. Where significant differences were revealed, Tukey's post-hoc test was used to determine the nature of these differences.

An issue that this researcher expected to encounter during data analysis was missing data within the survey results. The researcher addressed this as a separate issue for each measure in the survey (The demographic questionnaire, The Boundary Questionnaire, EOM-EIS-revised, and ISI3), meaning that missing data for one measure did not influence data in another measure. Two approaches to handling missing data were used in this study: mean imputation, and listwise deletion.

In *mean imputation* the researcher acquired the mean for the item across participants, substituting this mean for the missing item (Montiel-Overall, 2006). This approach is commonly

used among researchers and has the benefit of preserving the power of calculations that might be lost when using the listwise deletion method (Acock, 2005; Montiel-Overall, 2006). In the *listwise deletion* method, incomplete cases were eliminated from the analysis (Montiel-Overall, 2006). This approach is also commonly used, being the default of statistical packages like SPSS (Acock, 2005). For this study, the approach used was determined by the percentage of missing items for the measure being considered. While mean substitution was desirable for preserving power, Acock (2005) expressed that it “is especially problematic when there are many missing values” (p. 1016). He suggested that when more than 30% of items in a measure are missing the result is excessive variance. For this reason, when more than 30% of items on a particular measure (The BQ-18, EOM-EIS, ISI3) were missing, the case was eliminated from the analysis using the listwise deletion method. For cases where less than 30% of items on a particular measure (The BQ-18, EOM-EIS, ISI3) were missing for a participant, the mean substitution method was utilized. Missing items for the demographic questionnaire did not affect data analyses because no data analyses were run based on demographic variables. The researcher noted missing demographic data when reporting demographic variables of the participants of the study. The researcher did not investigate non-response bias.

Summary

This research was intended to explore the differences in boundary scores between identity statuses and styles. Toward this end, undergraduate college students from Virginia Tech were recruited as participants to complete a 129 item survey. This survey included a demographic questionnaire, the BQ-18 (Kunzendorf et al., 1997), the EOM-EIS-revised (Bennion & Adams, 1986), and the ISI3-revised (Berzonsky, 1992c). Statistical analysis of this gathered data included a two-way ANOVA for exploring the identity constructs (status, style). Where

significant differences were revealed among either identity construct or significant interaction between them was found, post-hoc analyses were used to examine those differences in more detail.

Chapter 4

Results

Introduction

Differences among undergraduate students in boundary scores for the four identity statuses and three identity styles were examined in this study. Following is a description of the procedures used in collecting and cleaning the data. Participants for the study are described by the course they completed the survey in, their gender, age, and race. Once the description of participants and research methods is provided, statistical procedures are then presented beginning with reliability analyses for the three measures used in the study (BQ-18, EOM-EIS, and ISI3). Following these reliability analyses, the distribution of participants into their respective identity statuses and styles is provided, and then the results of the study are reported by addressing each research question.

Procedures

Data collection.

Upon receiving approval from Virginia Tech's Institutional Review Board on September 12th, 2011, the researcher contacted Michael Berzonsky by email to inform him of the plan to use his ISI3 measure in this study (per Dr. Berzonsky's request). Data were then collected for this study from Virginia Tech undergraduate students in four different courses (Professional Seminar within the College of Liberal Arts and Human Sciences, Travel and Tourism Management, General Chemistry, and Human Development 1) using two distinct procedures of collection (a paper format, and an online format). A paper form of the survey was administered to students in the Professional Seminar and Human Development 1 courses, and an online form of the survey

was administered to students in the Travel and Tourism Management and General Chemistry courses.

The Professional Seminar course in which data were collected for this study was a course for students within the College of Liberal Arts and Human Sciences. Data was collected from students in this course on September 19th, 2011 using a paper format during class time. A description of the study was read aloud by the researcher to students in the class as the survey was passed out. The first page of the survey was the informed consent, and completion of the survey implied consent. Students were given 30 minutes to complete the survey. At the end of this time a drawing was conducted to win a \$50 gift card to Kroger grocery store. To maintain the anonymity of participants, a copy of the survey with an identification number on the informed consent page was given to all students in the class. Each identification number had a duplicate number on an index card that was put into a container for the drawing. Winning the gift certificate was not contingent on completion of the survey. Additionally, course credit was given for completion of either the survey or an alternative assignment, and survey completion was assumed for those in attendance unless they turned in the other assignment. Out of 165 students enrolled in the Professional Seminar course, 154 surveys were acquired by the researcher (93% response rate).

On November 19th, 2011 data was collected from students in the Human Development 1 course using a paper format during class time. Procedures in this course for both data collection and the drawing for a \$50 gift card to Kroger grocery store reflected those utilized in the Professional Seminar course. Extra credit was awarded for completion of the survey, which was assumed for those in attendance. Out of 197 students enrolled in the Human Development 1 course, 149 surveys were collected (76% response rate).

Data was collected from students in the Travel and Tourism Management course between the dates of October 12th and October 19th, 2011 using an online format. The online format of the survey utilized Qualtrics software and was designed to reflect that of the paper format, with similar page formatting and design. An invitation to participate in the study was emailed to the students by their professor, and this invitation included the same study description that was read aloud to classes in which the survey was administered by paper format. This email also provided a web link that students could copy and paste into their web browser, taking participants to the informed consent page and then the study. At the end of the survey, students had the opportunity to provide an email address and be entered into a drawing to win a \$50 gift card to Kroger grocery store. Entering an email address was not required to complete the survey. An online random number generator determined the winner of the gift card, and that person was contacted by email with 2 options for claiming the prize: 1) Meeting somewhere on the Virginia Tech campus for delivery, or 2) Providing a mailing address where the gift card could be sent. Extra credit for participating in this survey was also provided by the course professor, with an alternative extra-credit opportunity offered in the form of a 1-2 page article review. To award extra credit for participation in the study, all online surveys administered in the class had the same identification number at the end of the survey that students could report to the professor for the extra credit. Out of 215 students in the class, 175 surveys were collected (81% response rate).

From the period of October 13th to October 20th, 2011 data was collected from students in the General Chemistry course using the online format. Procedures for administering the online survey in this course reflected those used for the Travel and Tourism Management course, with similarities in design and administration, as well as the \$50 gift card incentive. This is the only course in which extra credit or course credit was not offered to students for their participation,

and the course produced low response rates (28.8%) with 117 surveys collected from a class of 406 students (29% response rate).

The data for this study was drawn from undergraduate students across four courses at Virginia Tech (Professional Seminar, Travel and Tourism Management, General Chemistry, and Human Development 1). Because the data was gathered using two different formats (paper and online), the researcher examined these formats for differences. Since the BQ-18 yields a continuous variable score (with a potential range from 0 - 72), the boundary score it produces was selected for this comparison. Out of a possible range of 0 - 72, the sample range of boundary scores reflected in this study was from 10 - 58. Examination for differences between the two formats was conducted with an independent-samples *t*-test, with the boundary score from the BQ-18 as the dependent variable and the format of administration as the independent variable (paper or online format). The analysis failed to produce a significant *t* value ($t(509) = 1.453, p > .05$), indicating that there is no significant difference between these two formats in terms of the boundary scores they yield. These results can be seen in Tables 1 and 2.

Table 1

Group Statistics for Boundary Scores of Paper and Online Formats (N = 549)

AdminFormat	N	Mean	Std. Deviation	Std. Error Mean
Paper	296	34.5547	7.78373	.45242
Online	253	33.5201	8.74293	.54966
Total	549			

Table 2

Independent Samples T-test for Boundary Scores of Paper and Online Formats (N = 549)

	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Equal Variances Assumed	4.895	.027	1.467	547	.143	1.03463	.70548
Equal Variance not Assumed			1.453	509	.147	1.03463	.71191

Data cleaning.

The total number of surveys acquired reached 595 before cleaning procedures were used (154 from Professional Seminar, 149 from Human Development 1, 175 from Travel and Tourism Management, and 117 from General Chemistry). Cleaning of the master data set addressed both issues of missing data and criteria for participation in the study. Two approaches for handling missing data were used: mean imputation, and listwise deletion. For *mean imputation* the researcher acquired the mean for the missing item across participants, substituting this mean for the missing item, and for the *listwise deletion* method the missing case was eliminated from the analysis. Based on the suggestions of Acock (2005), mean imputation was used for cases where less than 30% of items were missing on a particular measure, while listwise deletion was used for those cases in which 30% or more items on a measure were missing. This initial cleaning of the data eliminated 37 cases (3 from Professional Seminar, 5 from Human Development 1, 29 from Travel and Tourism Management, and 0 from General Chemistry) using listwise deletion, reducing the total number of cases from 595 to 558. The researcher then removed an additional 9 cases for not meeting the age requirements for the study (ages 18 to 24), reducing the total number of cases to 549. Mean imputation was used for 57 items in 26 of the remaining cases. 41 of these items were for the EOM-EIS, 10 were for the BQ-18, and 6 were for the ISI3. After these cleaning procedures, the data was transferred into SPSS for analysis.

Participants

Participants in the study were drawn from four undergraduate courses offered at Virginia Tech. Across these four courses, 149 participants were drawn from the Professional Seminar course (27.1%), 168 from the Travel and Tourism Management course (30.6%), 85 came from the General Chemistry course (15.5%), and 147 from the Human Development 1 course (26.8%), yielding a total of 549 participants. 383 of the participants were female (69.8%) and 164 were male (29.9%). Two participants chose not to provide gender related information. The age range of participants for this study was 18 to 24 years old. The majority of participants (92%) were between 18 and 21 years old, with 131 participants at 18 years (23.9%), 124 participants at 19 years (22.6%), 122 participants at 20 years (22.2%), and 128 participants at 21 years (23.3%). The remaining 8% of participants were between 22 and 24 years old, with 34 participants at 22 years (6.2%), 8 participants at 23 years (1.5%), and 2 participants at 24 years of age (.4%). Participants' racial makeup included 455 Caucasians (82.9%), while 49 participants identified as Asian (8.9%), 17 participants identified as Black or African American (3.1%), 13 participants identified as Latina or Hispanic (2.4%), 2 participants identified as Native American (.4%), 4 participants identified as Pacific Islander (.7%), and 7 participants identified as other (1.3%). Two participants chose not to provide racial related information (.4%).

Results

Prior to addressing the study's purpose, reliability analyses were conducted for each of the measures used in this study (BQ-18, EOM-EIS, and ISI3) to inform understanding of the results. These reliability analyses were conducted before mean imputation procedures. Of the 3 measures the BQ-18 revealed the lowest internally consistent scale (Cronbach's $\alpha = .659$),

followed next by the ISI3 (Cronbach's $\alpha = .728$), with the EOM-EIS producing the highest internally consistent scale (Cronbach's $\alpha = .804$). These results can be seen in Table 3 below. With the reliability analyses completed, the researcher then began to address the purpose of the study.

Table 3

Reliability Analyses for the BQ-18, EOM-EIS, and ISI3

Measure	Cronbach's Alpha	Cronbach's Alpha Based On Standardized Items	N Total	N of Items
BQ-18	.659	.647	543	18
EOM-EIS	.804	.809	534	64
ISI3	.728	.734	543	40

The purpose of this study was to examine differences in boundary scores for the four identity statuses, and the three identity styles with a sample of undergraduate students. In order to examine these differences, a boundary score was calculated for each participant using the BQ-18, an identity status was ascribed to each participant based on the protocol described by Adams, Shea, and Fitch (1979), and a primary identity style was ascribed based on the steps described by Berzonsky (1992a, 1992b). The distribution of identity statuses can be seen in Table 4, with 42 participants assigned to the identity diffusion status (7.7%), 52 participants to the identity foreclosure status (9.5%), 73 to the identity achievement status (13.3%), and 317 to the moratorium status (57.7%). Sixty-five (11.8%) participants were ascribed to the transition category for meeting the criteria of 2 or more statuses. The identity style distribution can be seen in Table 5, with 210 participants assigned to the diffuse/avoidant style (38.3%), 166 participants to the informational style (30.2%), and 173 participants to the normative style (31.5%). With

boundary scores calculated, and identity statuses and styles ascribed, the researcher then examined differences in boundary scores for the identity statuses and styles.

Table 4

Identity Status Ascribed (N = 549)

Identity Status	Frequency	Percent
Identity Diffusion	42	7.7
Identity Foreclosure	52	9.5
Identity Achievement	73	13.3
Moratorium	317	57.7
Transition	65	11.8
Total	549	100.0

Table 5

Primary Identity Style Ascribed (N = 549)

Identity Style	Frequency	Percent
Diffuse/Avoidant Style	210	38.3
Informational Style	166	30.2
Normative Style	173	31.5
Total	549	100.0

With the examination of differences in boundary scores for the identity statuses and styles as the purpose of this study, a two-way analysis of variance was used to answer the following research questions:

1. Does identity status effect boundary scores?
2. Does identity style effect boundary scores?
3. Does identity status depend on identity style?

In this analysis, identity status and identity style served as the independent variables, while boundary score served as the dependent variable. Levene's Test for Equality of Error Variance

demonstrated that significant differences did not exist between the standard deviations of each group ($F = 1.476, p > .05$), and the results of the overall model can be seen in Table 6. While this analysis did not reveal a significant main effect for identity status ($F = .738, p > .05$) or an interactional effect between identity status and style ($F = 1.042, p > .05$), a significant main effect was found for identity style ($F = 16.883, p < .000$). The results of this analysis will be used to address each research question individually.

Table 6

Tests of Between-Subjects Effects on Boundary Score (N = 549)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4489.598	14	320.686	5.222	.000
Intercept	200810.767	1	200810.767	3270.091	.000
Status	181.198	4	45.300	.738	.567
Style	2073.524	2	1036.762	16.883	.000
Status * Style	512.104	8	64.013	1.042	.403
Error	32792.038	534	61.408		
Total	674837.353	549			
Corrected Total	37281.636	548			

1. Does identity status effect boundary scores?

There was no main effect for identity status on the boundary score ($F = .738, p > .05$).

2. Does identity style effect boundary scores?

A significant main effect was found for identity style on the boundary score ($F = 16.883, p < .000$). Tukey's HSD was used post hoc to examine differences among identity styles and can be found in Table 7. Significant differences were found between the diffuse/avoidant and informational styles ($p < .05$), the diffuse/avoidant and normative styles ($p < .000$), and the

informational and normative styles ($p < .000$). The potential range of scores is 0 - 72 on the BQ-18, and the range of scores for this study's sample was 10 - 58. Participants utilizing the diffuse/avoidant style ($M = 36.65$) scored significantly higher on the boundary measure than participants utilizing the informational style ($M = 34.72$), who likewise scored significantly higher on the boundary measure than participants utilizing the normative style ($M = 30.34$). While these differences are statistically significant, the practical significance is limited. The spread between the three identity style means is only 7 points out of a total of 72.

Table 7

Multiple Comparisons Among Identity Style Boundary Scores – Tukey HSD (N = 549)

(I) Primary ID Style Ascribed	(J) Primary ID Style Ascribed	Mean Difference (I - J)	Std. Error	Sig.	95% Conf. Interval (Lower B.)	95% Conf. Interval (Upper B.)
Diffuse/Avoidant	Informational	1.9355*	.81385	.047	.0228	3.8483
	Normative	6.3127*	.80460	.000	4.4216	8.2037
Informational	Diffuse/Avoidant	-1.9355*	.81385	.047	-3.8483	-.0228
	Normative	4.3772*	.85141	.000	2.38483	6.3782
Normative	Diffuse/Avoidant	-6.3127*	.80460	.000	-8.2037	-4.4216
	Informational	-4.3772*	.85141	.000	-6.3782	-2.3761

Note. Based on observed means.

The error term is Mean Square (Error) = 61.408.

*. The mean difference is significant at the .05 level.

3. Does identity status depend on identity style?

There was no interaction effect between identity status and identity style ($F = .704, p > .05$).

Summary

This study was designed to explore students' differences in boundary scores between identity status and style. A total of 549 participants for the study were drawn from four different undergraduate courses at Virginia Tech (Professional Seminar, Travel and Tourism

Management, General Chemistry, and Human Development 1). The data gathered from these participants was analyzed using a two-way ANOVA, in which the identity status and style constructs served as the independent variables and the boundary score served as the dependent variable. A significant main effect was not found for the identity status construct ($F = .738, p > .05$), and no interactional effect was found between the identity status and identity style constructs ($F = 1.042, p > .05$). There was a significant main effect for the identity style construct ($F = 16.883, p < .000$), for which a post-hoc analysis revealed the diffuse/avoidant style ($M = 36.65$) as significantly higher in boundary score than the informational style ($M = 34.72$), which in turn was significantly higher in boundary score than the normative style ($M = 30.34$). These results are discussed in chapter 5.

Chapter 5

Discussion of Results

The purpose of this study was to examine students' differences in boundary scores for the identity status and identity style constructs. The results of this study are presented below, followed by a discussion of these results and their implications. Limitations of the study are presented and recommendations for future research are provided.

In order to examine the differences in boundary scores for the four identity statuses and three identity styles the following research questions were posed:

1. Does identity status effect boundary scores?
2. Does identity style effect boundary scores?
3. Does identity status depend on identity style?

A two-way ANOVA was conducted to address these research questions, with boundary score as the dependent variable and identity status and identity style as the independent variables. The results of the overall model revealed no significant main effect for identity status ($F = .738, p > .05$) or interactional effect between status and style ($F = 1.042, p > .05$), though a significant main effect was found for identity style ($F = 16.883, p < .000$). The answers to each research question are addressed individually below.

1. Does identity status effect boundary scores?

There was no main effect for identity status on the boundary score ($F = .738, p > .05$).

2. Does identity style effect boundary scores?

A significant main effect was found for identity style on the boundary score ($F = 16.883, p < .000$). Tukeys HSD revealed significant differences between each of the identity styles, with significant differences between the diffuse/avoidant and informational styles ($p < .05$), the

diffuse/avoidant and normative styles ($p < .000$), and the informational and normative styles ($p < .000$). Participants utilizing the diffuse/avoidant style ($M = 36.65$) scored significantly higher on the boundary measure than participants utilizing the informational style ($M = 34.72$), who likewise scored significantly higher on the boundary measure than participants utilizing the normative style ($M = 30.34$). On the boundary measure, higher scores indicated thinner boundaries while lower scores indicated thicker boundaries.

3. Does identity status depend on identity style?

There was no significant interactional effect between identity status and identity style ($F = .704$, $p > .05$).

Discussion

Of the two identity constructs used in this study with a convenience sample of undergraduates from one institution, identity style reflected boundary differences where identity status did not. Following is a discussion of these findings organized by each research question's independent variable(s). Implications of these findings and their use in professional practice are then presented.

Identity status.

No significant boundary differences were found among the four identity statuses in this sample of undergraduate students. With no significant differences found, this study does not give support for a relationship between the boundary and identity status constructs. This appears to differ from Marcia's (1976) descriptions of identity diffusion as scattered and fragmented, identity foreclosure as closed and rigid, and identity achievement as open and flexible, yet there are several potential reasons for these differences. Marcia's descriptions were based on work over 30 years ago when he explored the association between the statuses and different *life styles*.

The connection he found between the statuses and life styles were also among a sample of adults out of college. With this study conducted over 30 years later, exploring boundaries rather than life styles, and utilizing a sample of undergraduate students, there are many potential reasons for the differences found.

Identity style.

While identity status did not yield significant boundary differences in this study, identity style did. Participants utilizing a normative style reflected more rigid boundaries than those using the information style, who in turn reflected thicker boundaries than those using the diffuse/avoidant style. While these differences were statistically significant, the practical significance of these differences may not be as strong. From an overall boundary score range between 0 and 72, the mean for each identity style was between 30 and 37. With so little spread between the means for each group, the practical difference between the boundary types for each identity style appear to be minimal. Even still, these findings are consistent with the structural model (on page 47) and previous descriptions of the identity styles. The most rigid boundaries in this study were reflected by the normative style, which has previously been described as rigid, inflexible, and closed (Berman et al., 2001; Berzonsky & Neimeyer, 1994; Schwartz, 2001). Boundaries for the information style in this study were centered between the normative and diffuse/avoidant styles, supporting previous descriptions of the informational style as flexible and adaptable in its commitments (Berman et al., 2001; Berzonsky, 1989; Schwartz, 2001), and the most diffuse boundaries in the study were represented by the diffuse/avoidant style, which has been described by its fragmentation and tendency to avoid commitments (Berzonsky, 1989; Schwartz, 2001). Findings of this study with an undergraduate sample suggest that different boundary types are utilized by each identity style in approaching identity related matters.

Individuals utilizing a normative style tend to rely on a more rigid boundary type to maintain those commitments set for them by significant others (Berzonsky, 1989). Already established characteristics of the normative style can be seen as contributing to the rigid boundary, such as distancing (Berzonsky, 1992a), and values of tradition, security, and conformity (Berzonsky et al., 2011). When faced with alternative identity options that challenge or bring into question the commitments of an individual utilizing the normative style, the individual will tend to distance from those external identity options, and reinforce their commitments through the values of tradition, security, and conformity; rigidifying the boundary that delineates identity.

Individuals utilizing an informational style tend to use a clear boundary type to structure the identity in a way that allows flexibility for continued personal growth (Berman et al., 2001; Berzonsky, 1993, 1994; Berzonsky et al., 2011; Berzonsky & Luyckx, 2008; Berzonsky & Sullivan, 1992). The clear boundary is flexible enough to permit new identity related options for consideration, but established enough to differentiate the individual from others. Certain characteristics associated with the information style can be seen contributing to a clear boundary. Flexibility in the boundary is supported by informational style tendencies to be open to new experiences (Berzonsky, 1993; Berzonsky et al., 2011), while substantive commitments and boundary structure are enforced through introspectively processing the new information acquired and reflecting on that information's implications for one's personal life (Berzonsky, 1993, 1994; Berzonsky et al., 2011; Berzonsky & Luyckx, 2008; Berzonsky & Sullivan, 1992).

Individuals utilizing the diffuse/avoidant style tend to exemplify a diffuse boundary with limited regulatory functioning. When faced with identity related options these individuals strategically avoid the self-relevant information that is present (Berzonsky & Ferrari, 2009),

involving themselves in self or emotion focused coping strategies rather than problem focused strategies that would involve the processing of information and introspection (Berzonsky, 1992b; Berzonsky & Luyckx, 2008; Berzonsky & Sullivan, 1992). With little or no identity commitments, these strategies associated with the diffuse/avoidant style reflect a weak and loose boundary that neither protects an identity nor provides it with structure.

The findings of this study yielded significant boundary differences between the three identity styles, with the normative style producing the most rigid boundary scores, the information style producing boundary scores that are balanced between rigidity and flexibility, and the diffuse/avoidant style producing the most diffuse boundary scores. These findings are consistent with the boundary types suggested by the structural model to be associated with each of the identity styles. The relationship between these constructs within this sample of undergraduates suggests that unique boundary types are utilized by each identity style when approaching matters of identity formation.

Construct interactions.

With no significant effect being found for identity status on the boundary measure, it is not surprising that interactional effects were also absent between the identity status and style constructs. Though the identity styles correlate with the identity statuses and “are assumed to be processes underlying identity status” (Berzonsky, 1989, p. 274), with no effect of identity status on the boundary score there was no relationship for identity style to mediate. Thus in this study, the identity status and style constructs operated independently in their effects on boundary scores.

Of the two identity constructs used in this study, boundary differences were found for identity style and not for identity status. Identity style reflects a collective set of strategies by

which one approaches the identity formation process. The findings of this study suggest that these different strategies for approaching identity formation involve the use of different boundary types in structuring the identity and regulating its contact with other entities. Identity status on the other hand reflects a state of identity based on one's levels of exploration and commitment. According to the findings of this study, an individual's identity status is unrelated to boundary type. Taking these findings together, boundaries appear to be important for these students in facilitating identity formation processes, but were not an important characteristic of the identity itself. These findings have informed changes to the structural model that are reflected in Figure 4. This new figure does not include identity status, but illustrates the relationship between identity style and boundaries that are supported by the findings of this study. This has significant implications for professionals facilitating identity formation in their work.

Implications of the Results of This Study

This researcher found a relationship between the boundary and identity style constructs. Implications of these results are that distinct boundary types are utilized by students with different identity styles. Specifically, students with a diffuse/avoidant identity style utilize a diffuse boundary in regulating identity-related interactions, students with a normative identity style utilize a rigid boundary in regulating identity-related interactions, and students with an information identity style utilize a clear boundary in regulating identity-related interactions. These implications may have meaning for professionals working with students in mental health or education fields.

Findings of this study can inform the work of these professionals as they serve to facilitate the identity formation process. The boundary type that clients/ students exhibit during

Figure 4. Revised Structural Model of Identity Development

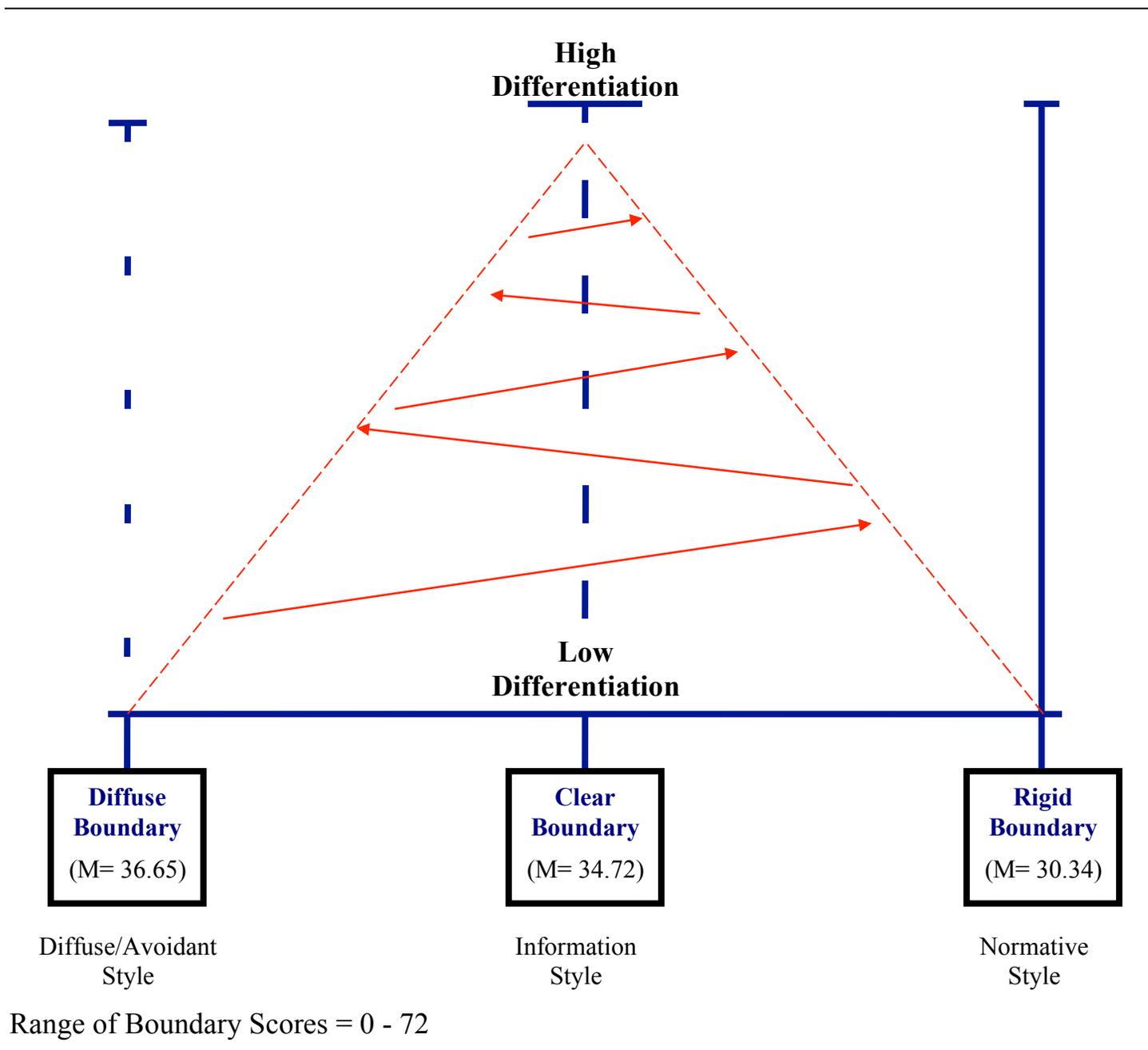


Figure 4. A graphic illustrating both the relationship between identity style and boundaries and the differentiation process in terms of forming a clear boundary. The diffuse boundary is illustrated on the left by a well-spaced, vertical dotted line; the diffuse/avoidant style is aligned with it along the horizontal boundary continuum. The clear boundary is illustrated in the middle of the figure by an evenly spaced vertical dotted line; the information style is aligned with it along the horizontal boundary continuum. The rigid boundary is illustrated by a solid vertical line on the right of the figure; the normative style is aligned with it along the horizontal boundary continuum. Use of the information style in the identity formation process involves gathering and critically considering information before making decisions. The role of boundaries in this process is illustrated by the triangular figure and arrows, showing a reiterative process of rigidifying and flexing ones boundary as he/she seeks to establish a clear boundary that effectively frames ones identity commitments while maintaining flexibility in those commitments. Each iteration in this process draws closer to the clear boundary sought. The term “high differentiation” is at the top of the triangle representing a relative achievement of that clear boundary which delineates ones identity.

interactions concerning matters of identity can inform both diagnostic impressions and identity-facilitating interventions. Diagnostic impressions are shaped as these boundaries inform professionals of the identity style that is likely being used by a client when approaching identity-related tasks; boundaries are another piece of information that helps to inform diagnostic impressions. Interventions that facilitate identity formation can be tailored for clients using different identity styles based on the boundaries exhibited. The usefulness and appropriateness of identity-related interventions change with the boundary type.

Clients that exhibit consistently diffuse boundaries in their identity-related interactions are likely to be avoiding tasks associated with identity formation and may require intentional steps that provide a unique form of both external encouragement and pressure in order to engage in their own identity growth. Since this diffuse/avoidant style tends to emphasize a social identity that is other-focused rather than self-focused (Berzonsky, 1994), such intentional steps on the part of the professional should involve the establishment and maintenance of clear boundaries in both the professional relationship and in other arenas in which identity-related processes occur (such as group counseling or in the classroom environment). The establishment and maintenance of these boundaries would make it more difficult for these clients to rely on others' identity commitments (through emphasizing a social identity), thus applying a unique pressure to explore ones own identity options. Rather than an interpersonal pressure to explore identity options, maintaining these clear boundaries applies an external, circumstantial pressure by preventing the client from relying on others for the task of identity negotiation. Overt and direct steps on the part of professionals to catalyze identity growth are not likely to be effective since the diffuse boundary provides no frame for processing such information through introspection or reflection (Berzonsky & Luyckx, 2008; Berzonsky & Sullivan, 1992); in fact these efforts are most likely

to create another interactional environment in which the client relies on others for their own sense of identity (Berzonsky, 1992b). While interventions for those exhibiting a diffuse boundary are more process oriented and focused on boundary establishment and maintenance, interventions for those reflecting a rigid boundary may be more direct and information focused in nature.

Clients exhibiting consistently rigid boundaries in their identity-related interactions are likely relying heavily on significant figures in their lives (such as parents or other close family members) for their sense of identity. These individuals may be distant and closed to information that challenges already established commitments within both the professional relationship and other arenas in which identity-related processes occur (group counseling and classroom environment) (Berzonsky, 1993, 1994). More direct professional interventions toward the acquisition and processing of new identity-related information may be productive for clients exhibiting a rigid boundary when the professional is able to remain a source of support and encouragement throughout the process. The direct interventions may be helpful in penetrating rigid boundaries, yet a professional that can provide support and encouragement during these times of high anxiety is essential since these clients tend to experience more *debilitating* anxiety when faced with stressful circumstances (Berzonsky, 1992a). While these interventions are more direct in order to negotiate the rigid boundary, interventions for a clear boundary can be more collaborative in nature.

Clients or students exhibiting clear boundaries in their interactions are likely to bracket social norms and mores fostered by their social context in order to gather information about identity opportunities typically on the fringe of that cultural practice. While this process may cause stress and anxiety in the familial and social system, the critical thinking practices of these

individuals typically lead them to healthy and satisfying lifestyle and identity commitments in the end (Berzonsky, 1992b). In working with clients exhibiting clear boundaries, professionals can facilitate identity-related growth in a less direct way than those exhibiting rigid boundaries. These clients are likely actively engaged in the identity formation process already, and the professional can continue to facilitate this process in a more collaborative way by providing relevant identity-related information and supporting autonomy through the maintenance of clear boundaries in both professional interactions and other identity-related interactions (group counseling and classroom environment).

The relationship between the boundary and identity style constructs found in this study has implications for professionals in mental health and education fields. Effective facilitation of identity development among clients/ students may rely on different interventions tailored for negotiating various boundary types. Clients exhibiting diffuse boundaries may necessitate less direct interventions aimed at maintaining clear boundaries, those exhibiting rigid boundaries may necessitate more direct interventions coupled with strong support and encouragement, and those exhibiting clear boundaries may require a more collaborative relationship that supports the autonomy sought by the individual.

Limitations

Limitations of this study are inherent in its non-experimental design. Use of a convenience sample restricts the strength of this study's findings, specifically from drawing any cause-effect relationship between constructs (Reis & Judd, 2000). Additionally, the convenience sample for this study was limited to undergraduate college students from a single university, limiting the generalizability of the findings. Further limitations of this study include use of a survey for gathering data. Because surveys provide self-report data they are subject to social

desirability (Hancock, 2001; Smith, 1967). Limitations of survey research include “random error, some invalidity, and effects of the question format” (Ornstein, 1998, p. 115). One effect of the question format that is a unique limitation is this study involves the administration of the survey in both online and paper formats, which creates room for response differences between these two formats. While significant response differences were not found in boundary scores between the two formats ($t(547) = 1.467, p > .05$), this procedural inconsistency provides a layer of potential for validity concern beyond what is typical for survey research. Other limitations of this study have to do with the potential for measurement error specific to the BQ-18 (Kunzendorf et al., 1997).

The findings of this study show a significant effect of identity style on boundaries, but no relationship between identity status and boundaries as they are measured by the BQ-18 (Kunzendorf et al., 1997). It is possible that measurement error can account for the absence of a relationship between identity status and boundaries in this study. The potential for measurement error exists in two areas specific to the BQ-18: first is its relatively low internal consistency, and second is that identity is not addressed directly in the domains of the measure. Internal consistency of the BQ-18 (Cronbach’s $\alpha = .661$) is lower than the .70 alpha level typically considered acceptable (Urduan, 2010). This low internal consistency is a threat to validity, suggesting a lack of accuracy in its measurement of boundaries (Gliem & Gliem, 2003). In addition to the BQ-18’s relatively low internal consistency, the absence of an overt focus on identity in domains of the measure also leaves room for measurement error.

The BQ-18 measures boundaries in 12 domains (Sleep/wake/dream; Unusual experiences; Thoughts, feelings, and moods; Childhood, adolescence, and adulthood; Interpersonal; Sensitivity; Neat, exact, and precise; Edges, lines, and clothing; Opinions about

children and others; Opinions about organizations and relationships; Opinions about peoples, nations, and groups; and Opinions about beauty and truth), none of which address identity directly. It may be that boundaries are domain specific, and that the boundaries measured in this study by the BQ-18 are too general to yield significant effects for identity status, which itself is measured within specific domains not reflected in the BQ-18. If this were the case a more specific measure of identity-related boundaries would be necessary for detecting effects of identity status on boundaries, but such a measure does not yet exist. The development of a measure of identity-related boundaries could be used to determine whether a relationship with the identity status construct is dormant in the current study. In the case that an identity-related boundary measure upheld this studies current findings, it would still be useful in exploring the role of these boundaries in facilitating identity formation, structuring and supporting the identity, and regulating contact with other entities.

Future Research

Given the breadth of domains measured by the BQ-18 with no specific focus on identity, the development of a measure of identity-related boundaries would provide additional clarity for the findings in this study. If a relationship between boundaries and identity status did remain dormant in this study, an identity-related boundary measure would be necessary for its discovery. Such a measure would additionally be useful in research that tracks changes in boundaries specific to identity over time, and exploring correlates of boundaries related to identity. Ultimately, a measure of identity-related boundaries could help us to more fully understand how the structure of identity changes throughout the identity formation process.

Additional research exploring the connection between theory and professional practice would also be useful. Potential implications of this study's findings involve unique identity-

fostering interventions for different boundary types, yet these have need of direct empirical support. Clinical studies that are designed to investigate the effectiveness of the intervention strategies suggested for each boundary type are needed.

Summary

This researcher explored the effects of identity status and identity style on boundary scores. Analysis revealed significant effects of identity style on boundary scores, but did not report identity status differences on boundary scores. Boundary score differences between the three identity styles were all significant and reflective of those portrayed in the structural model. While the effects of identity style found in this study were consistent with the structural model and previous descriptions of each identity style (Berman et al., 2001; Berzonsky, 1989; Berzonsky & Neimeyer, 1994; & Schwartz, 2001), findings concerning the identity statuses did not align with these conceptions. The absence of an identity status effect on boundary scores suggests that Marcia's (1976) *life style* description of the identity statuses is reflective of an internal quality of the identity rather than the outer boundary that frames it. These findings have implications for professionals in mental health and education related practices. Interventions intended to foster identity development can be tailored to clients depending upon the boundary type they exhibit.

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Appendix A: IRB permission letter

Office of Research Compliance
Institutional Review Board
2000 Kraft Drive, Suite 2000 (0497)
Blacksburg, Virginia 24060
540/231-4606 Fax 540/231-0959
e-mail irb@vt.edu
Website: www.irb.vt.edu

MEMORANDUM

DATE: September 12, 2011

TO: Jesse Lile, Nancy E. Bodenhorn, Penny L. Burge, Laura Welfare, Nadine Hartig

FROM: Virginia Tech Institutional Review Board (FWA00000572, expires May 31, 2014)

PROTOCOL TITLE: Identity Development Project

IRB NUMBER: 11-609

Effective September 12, 2011, the Virginia Tech IRB Chair, Dr. David M. Moore, approved the new protocol for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report promptly to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at <http://www.irb.vt.edu/pages/responsibilities.htm> (please review before the commencement of your research).

PROTOCOL INFORMATION:

Approved as: **Exempt, under 45 CFR 46.101(b) category(ies) 2**

Protocol Approval Date: **9/12/2011**

Protocol Expiration Date: **NA**

Continuing Review Due Date*: **NA**

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

Appendix B: Demographic Questionnaire**1. What is your age?**

- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25 or older

2. What is your gender?

- Male
- Female

3. What is your race/ethnicity? (Please check only one)

- White (Caucasian)/
- Black (African or African American)
- Latina or Hispanic
- Native American
- Asian
- Pacific Islander
- Other: please list _____

4. What year did you start attending college?

- 2011
- 2010
- 2009
- 2008
- 2007 or earlier

5. What is your major(s) in school?

- Primary (Fill in the blank)
- Secondary (Fill in the blank)

6. Is your primary citizenship in a country *other than* the United States?

- Yes
- No

7. Before the age of 18, did you ever live outside of your home country for a period of one or more years?

- Yes
- No

Appendix C: The Boundary Questionnaire-18

Please try to rate each of the statements from 0 to 4. 0 indicates no, not at all, or not at all true of me. 4 indicates yes, definitely, or very true of me.

Please try to answer all of the questions and statements as quickly as you can.

Scale

0 1 2 3 4

1. My feelings blend into one another.
2. I am very close to my childhood feelings.
3. I am easily hurt.
4. I spend a lot of time daydreaming, fantasizing or in reverie.
5. I like stories that have a definite beginning, middle and end.
6. A good organization is one in which all the lines of responsibility are precise and clearly established.
7. There is a place for everything, and everything should be in its place.
8. Sometimes it's scary when one gets too involved with another person.
9. A good parent has to be a bit of a child, too.
10. I can easily imagine myself as an animal or what it might be like to be an animal.
11. When something happens to a friend of mine or to a lover, it is almost as if it happened to me.
12. When I work on a project, I don't like to tie myself down to a definite outline. I rather like to let my mind wander.
13. In my dreams, people sometimes merge into each other or become other people.
14. I believe I am influenced by forces that no one can understand.
15. There are no sharp dividing lines between normal people, people with problems and people who are considered psychotic or crazy.
16. I am a down-to-earth no-nonsense kind of person.
17. I think I would enjoy being some kind of creative artist.
18. I have had the experience of someone calling me or speaking my name and not being sure whether it was really happening or whether I was imagining it.

Scoring the Boundary Questionnaire

All the questions listed in the left-hand column (labeled “Thick to thin”) are “thin” items; the questions in the right handed column (labeled “Thin to thick”) are “thick” items. The difference should be clear from reading the items.

Under each number in the left-hand column, enter the score the subject has circled for that item. Under each number in the right-hand column, enter the *inverse* of the subject’s score, according to the following table:

$$4 = 0$$

$$3 = 1$$

$$2 = 2$$

$$1 = 3$$

$$0 = 4$$

	Thick to Thin		Thin to Thick		Score
	0	4	0	4	
Domain 1: Sleep/wake/dream	4, 13				
Domain 2: Unusual experiences	14, 18				
Domain 3: Thoughts, feelings, moods	1, 10				
Domain 4: Childhood, adolescence, adulthood	2				
Domain 5: Interpersonal	8, 11				
Domain 6: Sensitivity	3				
Domain 7: Neat, exact, precise	12		16		
Domain 8: Edges, lines, clothing	17		5		
Domain 9: Opinions about children and others	9				
Domain 10: Opinions about organizations and relationships			6		
Domain 11: Opinions about peoples, nations, groups	15				
Domain 12: Opinions about beauty, truth			7		

Total Score (SumBound):

Appendix D: Extended Objective Measure of Ego Identity Status (revised)
*The Revised Version of the
 Extended Objective Measure of Ego Identity Status*

Read each item and indicate to what degree it reflects your own thoughts and feelings. If a statement has more than one part, please indicate your reaction to the statement *as a whole*. Indicate your answer on the answer sheet by choosing one of the following responses. Do not write on the questionnaire itself.

Note: Each item is designated according to the domain area (Occupation, Religion, Politics, Philosophical Life Style, Friendship, Dating, Sex Roles, or Recreation) and Ego Identity Status (Identity Achievement, Moratorium, Diffusion or Foreclosure).

A= strongly agree
 B= moderately agree
 C= agree
 D=disagree
 E= moderately disagree
 F= strongly disagree

1. I haven't chosen the occupation I really want to get into, and I'm just working at whatever is available until something better comes along. (Occupation/Diffusion)
2. When it comes to religion, I just haven't found anything that appeals and I don't really feel the need to look. (Religion/Diffusion)
3. My ideas about men's and women's roles are identical to my parents'. What has worked for them will obviously work for me. (Sex Role/Foreclosure)
4. There's no single "life style" which appeals to me more than another. (Phil. L S/Diffusion)
5. There are a lot of different kinds of people. I'm still exploring the many possibilities to find the right kind of friends for me. (Friendship/Moratorium)
6. I sometimes join in recreational activities when asked, but I rarely try anything on my own. (Recreation/Diffusion)
7. I haven't really thought about a "dating style." I'm not too concerned whether I date or not. (Dating/Diffusion)
8. Politics is something that I can never be too sure about because things change so fast. But I do think it's important to know what I can politically stand for and believe in. (Politics/Achievement)
9. I'm still trying to decide how capable I am as a person and what jobs will be right for me. (Occupation/Moratorium)
10. I don't give religion much thought and it doesn't bother me one way or the other. (Religion/Diffusion)
11. There's so many ways to divide responsibilities in marriage, I'm trying to decide what will work for me. (Sex Roles/Moratorium)
12. I'm looking for an acceptable perspective for my own "life style" view, but I haven't really found it yet. (Phil. L S/Moratorium)

13. There are many reasons for friendship, but I choose my close friends on the basis of certain values and similarities that I've personally decided on. (Friendship/Achievement)
14. While I don't have one recreational activity I'm really committed to, I'm experiencing numerous leisure outlets to identify one I can really get involved in. (Recreation/Moratorium)
15. Based on past experiences, I've chosen the type of dating relationship I want now. (Dating/Achievement)
16. I haven't really considered politics. It just doesn't excite me much. (Politics/Diffusion)
17. I might have thought about a lot of different jobs, but there's never really any question since my parents said what they wanted. (Occupation/Foreclosure)
18. A person's faith is unique to each individual. I've considered and reconsidered it myself and know what I can believe. (Religion/Achievement)
19. I've never really seriously considered men's and women's roles in marriage. It just doesn't seem to concern me. (Sex Role/Diffusion)
20. After considerable thought I've developed my own individual viewpoint of what is for me an ideal "lifestyle" and don't believe anyone will be likely to change my perspective. (Phil. L S/Achievement)
21. My parents know what's best for me in terms of how to choose my friends. (Friendship/Foreclosure)
22. I've chosen one or more recreational activities to engage in regularly from lots of things and I'm satisfied with those choices. (Recreation/Achievement)
23. I don't think about dating much. I just kind of take it as it comes. (Dating/Diffusion)
24. I guess I'm pretty much like my folks when it comes to politics. I follow what they do in terms of voting and such. (Politics/Foreclosure)
25. I'm really not interested in finding the right job, any job will do. I just seem to flow with what is available. (Occupation/Diffusion)
26. I'm not sure what religion means to me. I'd like to make up my mind but I'm not done looking yet. (Religion/Moratorium)
27. My ideas about men's and women's roles come right from my parents and family. I haven't seen any need to look further. (Sex Roles/Foreclosure)
28. My own views on a desirable life style were taught to me by my parents and I don't see any need to question what they taught me. (Phil. L S/Foreclosure)
29. I don't have any real close friends, and I don't think I'm looking for one right now. (Friendship/Diffusion)
30. Sometimes I join in leisure activities, but I really don't see a need to look for a particular activity to do regularly. (Recreation/Diffusion)
31. I'm trying out different types of dating relationships. I just haven't decided what is best for me. (Dating/Moratorium)
32. There are so many different political parties and ideals. I can't decide which to follow until I figure it all out. (Politics/Moratorium)
33. It took me a while to figure out, but now I really know what I want for a career. (Occupation/Achievement)
34. Religion is confusing to me right now. I keep changing my views on what is right and wrong for me. (Religion/Moratorium)
35. I've spent some time thinking about men's and women's roles in marriage and I've decided what will work best for me. (Sex Roles/Achievement)

36. In finding an acceptable viewpoint to life itself, I find myself engaging in a lot of discussions with others and some self-exploration. (Phil. L S/Moratorium)
37. I only pick friends my parents would approve of. (Friendship/Foreclosure)
38. I've always liked doing the same recreational activities my parents do and haven't ever seriously considered anything else. (Recreation/Foreclosure)
39. I only go out with the type of people my parents expect me to date. (Dating/Foreclosure)
40. I've thought my political beliefs through and realize I can agree with some and not other aspects of what my parents believe. (Politics/Achievement)
41. My parents decided a long time ago what I should go into for employment and I'm following through their plans. (Occupation/Foreclosure)
42. I've gone through a period of serious questions about faith and can now say I understand what I believe in as an individual. (Religion/Achievement)
43. I've been thinking about the roles that husbands and wives play a lot these days, and I'm trying to make a final decision. (Sex Roles/Moratorium)
44. My parent's views on life are good enough for me, I don't need anything else. (Phil. L S/Foreclosure)
45. I've tried many different friendships and now I have a clear idea of what I look for in a friend. (Friendship/Achievement)
46. After trying a lot of different recreational activities I've found one or more I really enjoy doing by myself or with friends. (Recreation/Achievement)
47. My preferences about dating are still in the process of developing. I haven't fully decided yet. (Dating/Moratorium)
48. I'm not sure about my political beliefs, but I'm trying to figure out what I can truly believe in. (Politics/Moratorium)
49. It took me a long time to decide but now I know for sure what direction to move in for a career. (Occupation/Achievement)
50. I attend the same church my family has always attended. I've never really questioned why. (Religion/Foreclosure)
51. There are many ways that married couples can divide up family responsibilities. I've thought about lots of ways and now I know exactly how I want it to happen for me. (Sex Roles/Achievement)
52. I guess I just kind of enjoy life in general, and I don't see myself living by any particular viewpoint to life. (Phil L S/Diffusion)
53. I don't have any close friends. I just like to hang around with the crowd. (Friendship/Diffusion)
54. I've been experiencing a variety of recreational activities in hopes of finding one or more I can enjoy for some time to come. (Recreation/Moratorium)
55. I've dated different types of people and now know exactly what my own "unwritten rules" for dating are and who I will date. (Dating/Achievement)
56. I really have never been involved in politics enough to have made a firm stand one way or the other. (Politics/Diffusion)
57. I just can't decide what to do for an occupation. There are so many that have possibilities. (Occupation/Moratorium)
58. I've never really questioned my religion. If it's right for my parents it much be right for me. (Religion/Foreclosure)

59. Opinions on men's and women's roles seem so varied that I don't think much about it.
(Sex Roles/Diffusion)
60. After a lot of self-examination I have established a very definite view on what my own lifestyle will be. (Phil. L S/Achievement)
61. I really don't know what kind of friend is best for me. I'm trying to figure out exactly what friendship means to me. (Friendship/Moratorium)
62. All of my recreational preferences I got from my parents and I haven't really tried anything else. (Recreation/Foreclosure)
63. I date only people my parents would approve of. (Dating/Foreclosure)
64. My folks have always had their own political and moral beliefs about issues like abortion and mercy killing and I've always gone along accepting what they have.
(Politics/Foreclosure)

Appendix E: Identity Style Inventory (revised)

Scoring Instructions:

Information-Orientation = (2 + 5 + 6 + 16 + 18 + 25 + 26 + 30 + 33 + 35 + 37)

Normative-Orientation = (4 + 10 + 19 + 21 + 23 + 28 + 32 + 34 + 40)

Diffuse-Orientation = (3 + 8 + 13 + 17 + 24 + 27 + 29 + 31 + 36 + 38)

Commitment = (1 + 7 + 9* + 11* + 12 + 14* + 15 + 20* + 22 + 39)

*For scoring purposes these items are reversed (9, 11, 14 & 20). I'd appreciate information about any investigations in which the measure is used.

INSTRUCTIONS

You will find a number of statements about beliefs, attitudes, and/or ways of dealing with issues. Read each carefully, then use it to describe yourself. On the answer sheet, bubble in the number which indicates the extent to which you think the statement represents you. There are no right or wrong answers. For instance, if the statement is very much like you, mark a 5, if it is not like you at all, mark a 1. Use the 1 to 5 point scale to indicate the degree to which you think each statement is uncharacteristic (1) or characteristic (5) of yourself.

Scale

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

1. Regarding religious beliefs, I know basically what I believe and don't believe. (COMM)
2. I've spent a great deal of time thinking seriously about what I should do with my life. (INFO)
3. I'm not really sure what I'm doing in school; I guess things will work themselves out. (DIFF)
4. I've more-or-less always operated according to the values with which I was brought up. (NORM)
5. I've spent a good deal of time reading and talking to others about religious ideas. (INFO)
6. When I discuss an issue with someone, I try to assume their point of view and see the problem from their perspective. (INFO)
7. I know what I want to do with my future. (COMM)
8. It doesn't pay to worry about values in advance; I decide things as they happen. (DIFF)
9. I'm not really sure what I believe about religion. (COMM/REV)
10. I've always had purpose in my life; I was brought up to know what to strive for. (NORM)
11. I'm not sure which values I really hold. (COMM/REV)
12. I have some consistent political views; I have a definite stand on where the government and country should be headed. (COMM)
13. Many times by not concerning myself with personal problems, they work themselves out. (DIFF)
14. I'm not sure what I want to do in the future. (COMM/REV)
15. I'm really into my major; it's the academic area that is right for me. (COMM)
16. I've spent a lot of time reading and trying to make some sense out of political issues. (INFO)
17. I'm not really thinking about my future now; it's still a long way off. (DIFF)

18. I've spent a lot of time and talked to a lot of people trying to develop a set of values that make sense to me. (INFO)
19. Regarding religion, I've always known what I believe and don't believe; I never really had any serious doubts. (NORM)
20. I'm not sure what I should major in (or change to). (COMM/REV)
21. I've known since high school that I was going to college and what I was going to major in. (NORM)
22. I have a definite set of values that I use in order to make personal decisions. (COMM)
23. I think it's better to have a firm set of beliefs than to be openminded. (NORM)
24. When I have to make a decision, I try to wait as long as possible in order to see what will happen. (DIFF)
25. When I have a personal problem, I try to analyze the situation in order to understand it. (INFO)
26. I find it's best to seek out advice from professionals (e.g., clergy, doctors, lawyers) when I have problems. (INFO)
27. It's best for me not to take life too seriously; I just try to enjoy it. (DIFF)
28. I think it's better to have fixed values, than to consider alternative value systems. (NORM)
29. I try not to think about or deal with problems as long as I can. (DIFF)
30. I find that personal problems often turn out to be interesting challenges. (INFO)
31. I try to avoid personal situations that will require me to think a lot and deal with them on my own. (DIFF)
32. Once I know the correct way to handle a problem, I prefer to stick with it. (NORM)
33. When I have to make a decision, I like to spend a lot of time thinking about my options. (INFO)
34. I prefer to deal with situations where I can rely on social norms and standards. (NORM)
35. I like to have the responsibility for handling problems in my life that require me to think on my own. (INFO)
36. Sometimes I refuse to believe a problem will happen, and things manage to work themselves out. (DIFF)
37. When making important decisions I like to have as much information as possible. (INFO)
38. When I know a situation is going to cause me stress, I try to avoid it. (DIFF)
39. To live a complete life, I think people need to get emotionally involved and commit themselves to specific values and ideals. (COMM)
40. I find it's best for me to rely on the advice of close friends or relatives when I have a problem. (NORM)

Appendix F: Description of study for paper format

This survey is part of a study on identity development. Issues of identity development are particularly important for college students (such as yourself) and relate to many significant aspects of our lives (including work/career, relationships, and belief systems). My hope is that this research will increase understanding of the identity development process, and inform efforts to better facilitate this growth process. This study is approved by Virginia Tech's Institutional Review Board, and your help is very much appreciated.

To express my appreciation for your participation, we will have a drawing at the end of this class for a \$50 gift card to Kroger grocery store. Each survey that you all get has a number on the first page. I have written that same number on a card for each survey and put the card in this container. At the end of the class, I will draw a number from the container and the person who has that number on their survey can claim the gift card when handing in the survey.

If you are willing to participate in this study, please read over the informed consent on the first page of the survey. After reviewing this consent form, there will be an opportunity to begin the survey. It should take between 20 – 30 minutes to complete; at the end of this time we will do our drawing, so keep your survey with you until this time. I really appreciate your consideration of this opportunity.

Appendix G: Description of study for online format

This survey is part of a study on identity development. Issues of identity development are particularly important for college students (such as yourself) and relate to many significant aspects of our lives (including work/career, relationships, and belief systems). My hope is that this research will increase understanding of the identity development process, and inform efforts to better facilitate this growth process. This study is approved by Virginia Tech's Institutional Review Board, and your help is very much appreciated.

To express my appreciation for your participation, I will do a drawing specifically for your class, for a \$50 gift card to Kroger grocery store. At the end of the survey, there will be an opportunity for you to provide your email address, which enters you into the raffle. This is optional, but is necessary for the raffle so that I can contact you if you win. Your email address will not be used for anything else, and will be deleted once the drawing is complete.

If you are willing to participate in this study, please copy the link provided below and paste it into the web browser. This link will take you to the informed consent page for the study. After reviewing this consent form, there will be an opportunity to begin the survey, which should take between 20-30 minutes. Thank you for considering this opportunity.

<link to survey here>

Jesse Lile

Appendix H: Informed Consent Form for paper format

Thank you for considering participation in this study! This study is concerned with the process by which identities are formed. In particular, the study focuses on the structure of identity and how that structure changes across the identity formation process. If you choose to take this survey, your participation will be voluntary and you can stop at any time that you wish. To express my appreciation for your participation, we will have a drawing at the end of this class for a \$50 gift card to Kroger grocery store. This page has a number written in the upper right hand corner. I have written that same number on a card and put that card in a container with other numbers that correspond with other surveys in this class. At the end of the class, I will draw a number from the container and the person who has that number on their survey can claim the gift card when handing in the survey.

The survey includes 129 items, all of which are quick response items. Completing the survey should take between 20-30 minutes, and you should answer the items as quickly as you can. There are no identifiable risks to completing this survey. No direct benefits for completing the survey can be guaranteed either, though the information gained is hoped to benefit future knowledge and practice in helping professions.

This study is being conducted by Jesse Lile for his doctoral dissertation, under the supervision of his dissertation committee (Dr. Nancy Bodenhorn, Associate Professor, Virginia Tech; Dr. Penny Burge, Professor, Virginia Tech; Dr. Laura Welfare, Assistant Professor, Virginia Tech, and Dr. Nadine Hartig, Assistant Professor, Radford University). These are the only individuals who will have access to the data collected. This data will be kept under password protection on Jesse Lile's computer. Once all use of the data is complete, it will be deleted from the computers files. This study has been approved by the Institutional Review Board at Virginia Tech. If you have any questions regarding the study, please direct them to Jesse Lile at <jl34455@vt.edu>, or if you have questions or concerns about compliance with this research, to Nancy Bodenhorn <nanboden@vt.edu>, and/or David Moore, Chair of VT IRB at <moored@vt.edu>.

To voluntarily complete this survey, please turn to the next page to begin. Completing this survey indicates that you are 18 years or older, have read this description of the study, and agree to the terms of your participation.

Thank you,

Jesse Lile
Counselor Education Ph.D. student
Virginia Tech

Appendix I: Informed Consent Form for online format

Thank you for considering participation in this study! This study is concerned with the process by which identities are formed. In particular, the study focuses on the structure of identity and how that structure changes across the identity formation process. If you choose to take this survey, your participation will be voluntary and you can stop at any time that you wish. To express my appreciation for your participation, I will do a drawing for a \$50 gift card to Kroger grocery store. Only students who complete the survey from your class will be included in this raffle. At the end of the survey, there will be an opportunity for you to provide your email address, which enters you into the raffle. This is optional, but is necessary for the raffle so that I can contact you if you win and get the gift card to you. Your email address will not be used for any other purpose, and will be deleted once the drawing is complete.

Your participation will be anonymous, and your identity or email address will never be connected to the information gathered. The survey includes 129 items, all of which are quick response items. Completing the survey should take between 20-30 minutes, and you should answer the items as quickly as you can. There are no identifiable risks to completing this survey. No direct benefits for completing the survey can be guaranteed either, though the information gained in this study is hoped to benefit future knowledge and practice in helping professions.

This study is being conducted by Jesse Lile for his doctoral dissertation, under the supervision of his dissertation committee (Dr. Nancy Bodenhorn, Associate Professor, Virginia Tech; Dr. Penny Burge, Professor, Virginia Tech; Dr. Laura Welfare, Assistant Professor, Virginia Tech, and Dr. Nadine Hartig, Assistant Professor, Radford University). These are the only individuals who will have access to the data collected. This data will be kept under password protection on Jesse Lile's computer. Once all use of the data is complete, it will be deleted from the computers files. This study has been approved by the Institutional Review Board at Virginia Tech. If you have any questions regarding the study, please direct them to Jesse Lile at <jl34455@vt.edu>, or if you have questions or concerns about compliance with this research, to Nancy Bodenhorn <nanboden@vt.edu>, and/or David Moore, Chair of VT IRB at <moored@vt.edu>.

To voluntarily complete this survey, please click on the "next" button below. Entering this survey indicates that you are 18 years or older, have read this description of the study, and agree to the terms of your participation.

Thank you,

Jesse Lile
Counselor Education Ph.D. student
Virginia Tech