

**Identity Style in Adolescence: Developmental Precursors and Links with Social
Capital Breadth and Depth in Emerging Adulthood**

by

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Abstract

Significant gaps remain in the understanding of both the developmental antecedents of identity styles (inputs) and the interpersonal sequelae that flow from these styles (outputs). Of interest in the current study was whether personality and family environment assessed in early adolescence uniquely predict use of different identity styles. A second goal of the study was to examine whether identity styles uniquely predict qualities of interpersonal relationships with parents, romantic partners, and friends in early adulthood. Data were drawn from the prospective longitudinal Child Development Project ($N = 585$).

Results showed that the normative style was predicted by an additive combination of high warmth and low autonomy restriction, as well as Conscientiousness, Neuroticism, and low Openness. Diffuse style was predicted by low conscientiousness. Informational style was associated with lower autonomy restriction. With respect to interpersonal relationship outcomes, both informational and normative styles were associated with higher quality relationships with parents and, for normatively oriented individuals, higher quality romantic relationships. Diffuse style predicted fewer and poorer quality relationships in all domains. Possible explanations for divergent findings are presented along with integration of convergent findings into the existing literature.

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I. Introduction

Identity is described by Erikson (1968) as a crucial developmental task of adolescents on their way to becoming mature individuals. The task, more specifically, is the resolution of the conflict between identity and role confusion. One might argue that in present times, such a resolution is becoming increasingly complex. With the advent of rapid information sharing technologies, opportunities for exploring and constructing various identities have become ever more accessible. This statement could also be made in a more pessimistic light – that opportunities for role confusion have become ever more accessible (Berzonsky, 2003). Choosing to adopt the former, more optimistic interpretation, the study of identity development retains its significance, even more than half a century after its scientific debut.

Erikson's model is stage-oriented. Thus, each stage must be resolved in some manner before the next stage can be addressed. The most relevant example to the current study is that the stage in which one's identity is established precedes the stage wherein intimate relationships take on developmental importance, a hypothesis that has received some support in the literature (e.g., Beyers & Seiffge-Krenke, 2010). However, identity is often not yet solidified by early adulthood (Kroger, Martinussen, & Marcia, 2010), the time period when Erikson proposed that intimacy goals should begin to take salience. Identity and intimacy continue to develop through adulthood, with some studies finding less of a clear temporal ordering of the two constructs (Zimmer-Gembeck & Petherick,

2006). In sum, because of its links to social outcomes, the manner in which identity is constructed deserves some attention.

Progression of Identity Theory

There has been a great deal of research designed to validate and expand upon Erikson's theory (for a review, see Schwartz, 2001), all of which aids in charting the construction of identity during adolescence – a crucial phase of development. Much of the prior identity-related research has been dedicated to determining what is associated with ego-identity *status* – one can be either achieved, in moratorium (high exploration of identity), foreclosed (committed without exploration), or diffuse (avoidant) (Marcia, 1966, 1980). Most of these studies have used a cross-sectional design strategy. Though these studies have uncovered statistically significant associations between identity and a variety of personal and family characteristics, most of the investigators recognized that in order to answer questions concerning antecedents and outcomes of identity, a longitudinal analysis of variables surrounding identity is necessary.

There has been some attention to this detail in the literature. For example, in a meta-analysis of studies on identity status, Kroger et al. (2010) found that while most individuals have an achieved identity by middle adulthood, there is still some fluctuation in the prevalence of foreclosed and diffuse statuses through young adulthood. Luyckx, Soenens, and Goossens (2006) studied longitudinal relationships between the dimensions of identity commitment and exploration (derived from Marcia's theory) and personality variables. Among other findings, Luyckx et al. discovered that Neuroticism and Conscientiousness were longitudinally predictive of exploration.

Smits, Soenens, Vansteenkiste, Luyckx, and Goosens (2010) found that certain family environments had unique associations with identity variables. However, the researchers pointed out that the cross-sectional nature of the study prevented them from drawing any firm conclusions regarding directionality in the links among parenting, identity, and psychosocial adjustment. Soenens, Berzonsky, Vansteenkiste, Beyers, & Goossens (2005) suggested that longitudinal data would be necessary to disentangle the relationships between earlier personality-related factors and identity variables. While longitudinal data is a prerequisite for commenting on directionality, it does not provide sufficient evidence to determine causality.

In using a longitudinal data set, the present study aims to avoid such limitations. In addition, the present study takes a developmental perspective – there is interest in what kinds of early experiences influence adolescents' identity and how identity influences later outcomes. With respect to early experiences, Pettit and Arsiwalla (2008) noted that the preadolescent time period (age 11-13) has proven to be an influential stage when examining both the individual and contextual factors affecting children's behavioral issues. Once in the midst of adolescence, a time when competing expectations must be balanced and roles must be defined (Erikson, 1968), the way in which one makes identity relevant decisions takes on salience. For this reason, Berzonsky's (1990) identity processing model takes center stage during middle adolescence. While the statuses and styles are highly correlated, Berzonsky's model is differentiated from a status model (Marcia, 1966, 1980) in that it measures not an outcome, but a method of approaching an outcome. In effect, the outcome that an individual approaches is the construction of a cohesive identity. *How* one arrives there is the topic addressed by Berzonsky's theory.

According to Berzonsky's theory, an individual may be predisposed (but not condemned) to the use one of three styles. The informational style is defined by a willingness to take identity-relevant information and actively consider it in relation to their currently held self-view. These individuals may have an easier time accommodating their self-view to fit with new relevant information. In contrast, a normative individual has a more conservative method of processing identity-relevant information. This information is often checked against previously held norms from significant others, particularly family members. Finally, diffuse-avoidant individuals are reluctant to process identity-relevant information, preferring to put it off to a later time. Thus, these individuals often lack the desire to explore or be committed to their beliefs – a stark contrast to information-oriented and normative individuals, who both display either high levels of commitment (normative), exploration (informational), or both (possibly informational). Identity commitment is included as a subscale in Berzonsky's Identity Style Inventory, and measures the strength or clarity of the standards and beliefs that one holds (Berzonsky, 2003).

In attempting to answer questions of the developmental inputs *and* outputs of identity, there would appear to be less validity in using identity measures that carried any implication of stasis compared to those reflecting an ongoing process. In fact, the words “status” and “stasis” both have etymological origins in the Greek and Latin words for standing still. Adolescence is a time of anything but standing still. Furthermore, in heeding the call for more research of contextual effects on identity development (Schwartz, 2001), a process-oriented model that focuses on identity style (Berzonsky, 1990) is essential. Without the “process,” it becomes more difficult to form and evaluate

developmental hypotheses. To use a culinary analogy, identity – for the purposes of this study – is not the pie; it is the way in which one does the baking.

Individual and Contextual Factors Behind Identity Development

Continuing with the culinary analogy, there are always ingredients to be considered in the procedure. Two main ingredients to consider in the developmental antecedents of particular identity processing styles are personality and family environment. Personality, for the purposes of this study, refers to the “Big 5” model of personality (Costa & McCrae, 1992; McCrae & Costa, 1999). According to this model, there are 5 broad characteristics – neuroticism, extraversion, openness, agreeableness, conscientiousness – that make up an individual’s personality. These traits interact with external circumstances to produce an individual’s characteristic patterns of behavior. Personality is also linked with more specific internal characteristics. For example, one study (Stoeber, Otto, & Dalbert, 2009) linked conscientiousness to longitudinal changes in self-oriented perfectionism – the belief that being perfect is important and the subsequent setting of high standards for oneself. Another study found the effect of these 5 traits on a measure of creativity to be of a larger magnitude than the effect of intelligence (Batey, Chamorro-Premuzic, & Furnham, 2010).

Personality has also been shown to have a significant association with the different identity styles (Dollinger, 1995). A number of other studies (Duriez, Soenens, & Beyers, 2004; Soenens et al., 2005) have reported similar associations between identity style and personality characteristics. The most common connections were between informational style and openness, normative style and lack of openness, and diffuse-avoidant style and neuroticism.

Beyond within-individual characteristics such as personality, a balanced study takes into account contextual effects that operate outside the individual. With respect to family context, prior studies have connected it to various aspects of identity and related constructs. For example, higher quality parent-child interactions have been linked to adolescents' self-concept (Dekovic, 1997). Reis and Youniss (2004) made a similar discovery in their study, showing that less adolescent communication with mothers was associated with a lag in identity development – in their words, “identity decrement.” The above two studies seem to point toward the notion that the quality of the family environment boasts many links to the identity development of an adolescent. This is noteworthy, given the findings in past research that the influence of parents in their children's lives wanes significantly during the adolescent period (Larson & Richards, 1991). Research in identity development has taken into account the changing nature of the relationship between parents and adolescents. For example, Schwartz, Mason, Pantin, and Szapocznik (2009) noted that while early family functioning does predict proximal identity development, as the child enters middle adolescence, the relationship becomes bi-directional. Children behave in a certain way (e.g., start arguments), which evokes certain responses in the family (e.g., an increase in family conflict), which in turn may have associations with identity development.

More specific to the present study, there has been research that links family environment variables to the identity styles. For example, Smits et al. (2010) found that parenting style variables were associated with the motives behind using certain identity styles. Parenting style that fostered more autonomy in children was associated with the informational identity style, whereas autonomy-supportive parenting was negatively

related to the normative style. In a study with a sample of younger adolescents (~13 years of age), Berzonsky, Branje, and Meeus (2007) established that identity processing style was associated with an array of family environment measures. This study showed that the informational style was associated with open communication within the family. The normative style had an even stronger correlation with open communication within the family. In contrast to the Big 5 Openness construct as measured by Costa and McCrae, open communication in the Berzonsky (2007) study referred to the ability of family members to communicate freely with one another. For example, one of the statements participants rated in the cohesion scale was “My parents are always good listeners.” This provides evidence for the notion of normative individuals coming from close-knit families. On the other end of the spectrum, diffuse-avoidant identity style was not associated with any of the parental behavior variables, but was strongly negatively associated with adolescent disclosure to parents, commitment, and self-regulation.

In summary, we see that there is a body of research examining personality and identity style together and another body of research examining family environment and identity style together. However, there has been little in the way of combining the two sets of knowledge. In his study of identity style, identity commitment, and parental authority, Berzonsky (2004) posited that there could be non-environmentally related child characteristics that work to elicit certain parental responses. As this study showed a link between parenting behavior and identity style, there would appear to be merit in examining parenting (and other family context variables) along with individual characteristics in a study of the precursors of identity style.

Sequelae of Identity and Identity Style

Just as the present study is concerned with inputs from individual and contextual factors in the development of identity, it is also concerned with the outputs that flow from identity. A more developed identity is often linked to a variety of desirable outcomes, including more resilient self-esteem (Marcia, 1966, 1967), more satisfying romantic relationships (Montgomery, 2005; Zimmer-Gembeck & Petherick, 2006), reduced peer conflict (Reis & Youniss, 2004), and more positive response to relationship interventions (Kerpelman, Pittman, & Adler-Baeder, 2008). Generally speaking, informational and normative styles are linked with many adaptive outcomes, whereas the diffuse-avoidant style is linked with a variety of maladaptive outcomes spanning many realms of development.

There has been some debate over whether the informational style or the normative style is the most adaptive style of identity processing. In fact, the normative and informational styles often are correlated (Beaumont, 2009), perhaps because they both share a high level of commitment. The research findings distinguishing the two styles are mixed. For example, when Seaton and Beaumont (2008) controlled for the effects of commitment, they discovered that the informational style had advantages over normative style in the domains of proactive coping strategies and curiosity/exploration. On the other hand, the informational style does not always have the upper hand. In one study, the informational style was shown to be negatively associated with self-regulation (Berzonsky et al., 2007).

Given the importance of considering both the individual *and* his or her developmental context (Beyers & Goossens, 2008), one might assume that there would

be equal attention to these two domains in the literature concerning developmental sequelae. However, while the above findings illustrate some of the individual adjustment outcomes of using different identity styles, detailed research on the specifics of how the use of each style can relate to individuals' interpersonal outcomes is lacking. One such outcome would be an individual's level of social connectedness. "Connectedness" is a term that merits more explanation, given its widespread and often non-uniform usage. In using the term here, the reference is to the amount and quality of individuals' social experiences. Social connection is an important adjustment variable to consider, given its association with a variety of positive health and developmental outcomes (Barber & Schluterman, 2008). One framework for the study of social connection would be that of social capital.

Social capital, as discussed by Pettit and Collins (2011), provides an informative structure for examining the breadth and depth of individuals' interpersonal networks. In fact, there has been little to bridge the domains of identity and social capital. Social capital reflects the quality and availability of social resources in an individual's life (Coleman, 1988). One way in which this is measured is the quality and extensiveness of one's social contacts. While common knowledge would dictate that having a wide social network is a desirable state of affairs, researchers in social capital recognize that the depth of these relationships plays an important role in a person's well-being (Pulkkinen, Lyyra, & Kokko, 2011). In addition, there are several domains of social capital that may be measured, each with its own level of quality. In the literature, these domains are often narrowed down to nonromantic best-friend relationships, romantic partner relationships, and relationships with the family of origin (e.g., Pettit, Erath, Lansford, Dodge, & Bates,

2011). Examining identity and social capital together will provide an additional point of departure for research in the development of social capital as well as additional insight into the developmental sequelae of identity styles.

The Present Study

In essence, the present study examined the relationship between individual and family context precursors to identity style the relationship between those identity styles and early adult social capital. Keeping in mind Berzonsky's (2004) suggestion that parenting and personality features may contribute uniquely to identity style, the following predictions were made. First, a personality predisposed toward openness and a cohesive family environment was hypothesized to predict adolescents' information-oriented processing style. Next, a personality predisposed toward less openness yet retaining a close family environment was hypothesized to predict adolescents' normative processing style. Finally, a personality characterized by both neuroticism and a chaotic family environment was hypothesized to predict a diffuse-avoidant style.

In considering the relationship between identity style and social capital, each processing style was also thought to predict differing experiences across different domains of social capital. The hypothesis formulated were that (1) the information-oriented style would bear the strongest positive association with social capital breadth, as well as some depth in all domains (best-friend, romantic partner, family), which is consistent with the literature that associates the information-oriented style with the most positive outcomes; (2) the normative style would still bear a strong positive association with depth of social capital, with a weaker correlation than with the information-oriented style, taking into account the predicted reduction of quality in the friendship domain; (3)

the diffuse avoidant style would bear the weakest (or a negative) association with social capital across all domains. This is consistent with literature showing that this style is associated with the worst outcomes.

II. Review of Literature

The present study was concerned with the developmental precursors of identity style in middle adolescence and how the different styles may contribute to the development of social capital in early adulthood. Identity is intentionally the centerpiece of this study because of its importance in determining what individual's values, goals, and sense of purpose (Schwartz, 2001). Given the impact this construct has on a person's life, it would be helpful to understand both intra- and interpersonal developmental precursors of identity as well as the adjustment outcomes that flow from using certain styles. On the topic of developmental precursors to identity, the purpose of this study is to determine whether early family environment variables and Big-Five personality characteristics uniquely predict the use of certain identity-processing styles. This study was also designed to determine whether the informational style of identity processing has any advantages over the other two styles in terms of developmental sequelae, with specific focus on social capital in early adulthood. Social capital was of particular interest, given that one's success in developing interpersonal relationships can be seen as an indicator of successful adaptation (Englund, Kuo, Puig, & Collins, 2011).

With these objectives in mind, the review of the literature addresses the following topics: (1) development of identity as a construct in the literature, (2) personality and its relation to identity and identity-like outcomes, (3) the links between different family environments and the identity styles, and (4) social capital and the potential for linking

identity and social capital in research. Relevant gaps in the literature were examined with the intent of clarifying the purposes of the present study.

Identity Development

Erik Erikson's life-stage model of within-person psychological development (Erikson, 1959/1980, 1968) provided the basis for the development of literature on the topic of identity. In his model, an individual progresses through various stages within which critical conflicts must be resolved. Although these conflicts proceed in a pre-determined chronological order – trust vs. mistrust in infancy; autonomy vs. shame and doubt in toddlerhood; initiative vs. guilt in early childhood; industry vs. inferiority in late childhood; identity vs. role confusion for the adolescent period; intimacy and solidarity vs. isolation in young adulthood; generativity vs. self-absorption in adulthood; and integrity vs. despair in old age – their resolutions are not predetermined (Pittman, Keiley, Kerpelman, & Vaughn, 2011). Furthermore, the order may not be fully stage-like. In fact, Erikson believed that it is possible for there to never be a definitive resolution to each conflict. While each stage of life brings one conflict to the forefront of an individual's experience, past conflicts are still open to influence.

One major focus of this study was on the foremost conflict of adolescence – that between ego identity and identity confusion. These characteristics represent two poles on the identity-formation spectrum. Ego identity is characterized by the ability to synthesize past and present experiences into a self-determined identity that one deems worthy of presenting to oneself and the outside world, whereas identity confusion represents the inability to perform such a synthesis (Schwartz, 2001). As individuals approach the ego identity pole, they seem to be more cognizant of both their distinctiveness *and* similarities

to others, as well as their own personal strengths and weaknesses; as individuals approach the identity-confusion pole, they display more disorganization and less of an ability to distinguish themselves from others (Marcia, 1980). Marcia also notes that identity formation is not a neat process. It involves at least a commitment to a sexual orientation, an ideological stance, and a vocational direction – the synthesis of which can involve as much negation as affirmation.

In his study of Erikson's theory, Marcia eventually formulated his own conception of how individuals come to resolve the conflict between identity and role confusion. According to his theory (Marcia, 1966, 1980), an individual can be described as being in a particular identity *status*. In his framework, there are four statuses that correspond to varying levels of exploration and commitment to identity. Corresponding to the original Eriksonian dichotomy, Marcia posited the *achieved* and *diffuse* statuses. The achieved status represented someone who has experienced the "crisis" of identity formation and successfully navigated it, having a self-determined ideology and occupation. This person has explored multiple alternatives of occupation and ideology and has made firm commitments following serious consideration. The identity-achieved individual is comfortable and resilient in a variety of settings. In contrast, an identity-diffuse individual has not made any firm commitments, and is often uninterested in exploring and making these commitments. Between the two extreme statuses lie the *foreclosed* and *moratorium* statuses. A foreclosed individual has made a firm commitment to an occupation and an ideology without having engaged in a great deal of exploration. In Marcia's (1966) words, this individual has not yet experienced a crisis.

The individual in moratorium is in the midst of his crisis, but has not yet made any firm commitments to identity.

In his review of the identity literature, Schwartz (2001) noted a great deal of literature dedicated to expanding and revising Marcia's neo-Eriksonian theory. Some researchers chose to extend a particular aspect of Marcia's theory, such as Grotevant's (1987) extension of Marcia's definition of identity exploration. Grotevant places an emphasis on the exploration of identity as the main activity of identity formation, with the result of this activity being an identity commitment. Exploration in this framework is characterized by two factors: the possession of certain skills (such as critical thinking, problem-solving, etc.) and the willingness or unwillingness to engage in exploration.

While Grotevant's extension of Marcia's theory focused primarily on exploration, Berzonsky's (1990; Berzonsky & Neimeyer, 1994) extension of Marcia's model reformulated both commitment *and* exploration as processes rather than developmental endpoints. Berzonsky proposed that in the course of forming an identity, a person favors a particular style (though the use of all three is possible) to process identity-relevant information. This information often comes in the form of interaction with other persons in a social setting. While much of the research cited in the next several paragraphs focuses primarily on intrapersonal measures such as self-confidence, coping strategies, and curiosity, Berzonsky (1990) did recognize the Eriksonian view of identity formation as highly interactional.

The three styles put forth were *informational*, *normative*, and *diffuse-avoidant*. Berzonsky and Neimeyer (1994) proposed that Marcia's achieved and moratorium statuses were characterized by the use of an informational style of identity processing.

These individuals have a flexible level of commitment to identity and tend to actively seek out and process self-relevant information (Berzonsky, 2004a). The informational style is generally associated with openness and independence (Berzonsky, Cieciuch, Duriez, & Soenens, 2011). In contrast to this active seeking of information, individuals who use a normative style of identity processing are characterized by a more selective exploration and more rigid commitments to the norms of significant others. In addition, the normative style is linked to more conservative values (Berzonsky, 2004a; Soenens, Duriez, & Goossens, 2005). This style corresponds to Marcia's foreclosed status. Despite this contrast, the informational and normative styles are often positively correlated (e.g., Beaumont, 2009). Finally, the diffuse avoidant individual (which corresponds to Marcia's diffuse status) is characterized by procrastination, lack of future-orientation, and especially a low level of commitment (Schwartz, 2001).

The diffuse-avoidant style is linked to an identity formation process of relying on social aspects of identity such as reputation and impressions managed for others to define the self (Berzonsky, 1994). This style is consistently associated with a range of negative outcomes, including avoidance coping tactics, low empathy (Soenens, Duriez, & Goossens, 2005), hyperactivity and conduct problems (Adams et al, 2001), and lower self-esteem and decisional confidence (Berzonsky & Ferrari, 2009). In the interpersonal realm, the diffuse style is associated with poorer measures of relationship qualities between parents and adolescent children (Berzonsky, Branje, & Meeus, 2007). In contrast, the informational style is often associated with the most positive outcomes in the literature, such as empathy, buffering against conduct problems and stress, and wisdom (Adams, Berzonsky, & Keating, 2006; Adams, Munro, Doherty-Poirer, Munro, Peterson,

& Edwards, 2001; Beaumont, 2009; Berzonsky, 2003; Soenens et al., 2005). This may be due in part to the propensity of individuals who use this style to be intentional or “agentic” in their identity formation - something that Cote (2002) claims better equips individuals to navigate various life-course passages.

Individuals who use a normative style are likely to define themselves via the use of collective aspects of identity such as family and community values (Berzonsky, 1994). Similarly to the informational style, the normative style is linked to more positive family relationships and buffers against conduct problems (Adams, Berzonsky, & Keating, 2006; Adams, Munro, Doherty-Poier, Munro, Petersen, & Edwards, 2001; Berzonsky, Branje, & Meeus, 2007). Adams et al. (2006) characterize the normative style as adaptive insofar as it can anchor individuals that might otherwise be adrift in the modern proliferation of paths to identity formation. Generally speaking, though, the normative style is characterized as having fewer advantages in adjustment measures such as school achievement, tolerance, and emotional well-being than does the informational style (Beaumont, 2009; Berzonsky & Kuk, 2005; Seaton & Beaumont, 2008; Soenens, Duriez, & Goosens, 2005). However, the informational style is occasionally associated with negative outcomes, and the normative and informational styles are often moderately correlated in both outcome (Beaumont, 2009; Berzonsky, Branje, & Meeus, 2007; Dollinger, 1995; Seaton & Beaumont, 2008) and predictor (Dollinger, 1995) research.

Some studies in the literature have been designed to address the above inconsistencies. For example, in an effort to clarify the relationship between certain identity styles and outcome variables, Berzonsky and Neimeyer (1994) noted that commitment should be statistically controlled, especially because of its variability within

the informational style. In doing so, he found that the informational style still retained some advantages over the normative style, such as a sense of personal agency (Berzonsky, 2003). Beaumont (2009) established that even after controlling for commitment, the informational style alone predicted her construct of personal wisdom, which in turn predicted participants' happiness. In a similar study, Seaton and Beaumont (2008) found that the informational style was uniquely associated with proactive coping strategies and curiosity. While the studies cited here do address the topic of commitment, further research that fully takes into account the effect of commitment when addressing the outcomes of identity styles is necessary, as the commitment scale is excluded from analyses in many studies using Berzonsky's measure.

The research presented here situates identity style as a construct that has implications for outcomes in a variety of domains. Generally speaking, the informational style has the most positive outcomes associated with it compared to the other two styles. The diffuse style is generally linked to negative outcomes in the literature. While there is often overlap between the informational and normative styles in outcome research, controlling for commitment has been proposed as a method of distinguishing outcomes between the two. Given the long-term of the present study, not only outcomes but also predictors of identity style were considered.

Developmental Precursors of Identity Style

Berzonsky (2004b) suggests that there is the potential for both dispositional characteristics and family relationships to contribute to the development of identity style. Temperament and personality are individual difference attributes that have been linked a variety of intra- and interpersonal outcomes. Some research suggests that personality also

may play a role in identity development (Berzonsky, 2004b; Beyers & Goossens, 2008). This and related work will be reviewed in the following section.

Personality Development

The conception of personality as being defined by discrete traits is a concept that has been well-supported since the middle of the 20th century. Personality traits are defined by Winter and Barenbaum (1999) as “consistent intercorrelated patterns of behavior, especially expressive or stylistic behavior.” The number of core personality traits is a topic that has received some attention in the personality literature. Some propose that personality is encompassed by three primary traits (Eysenck & Eysenck, 1985), whereas others have proposed a five-factor model of personality (Costa & McCrae, 1992; McCrae & Costa, 1999). In their conceptual framework, Costa and McCrae note that the five traits are underlain by in-born biological factors. Thus, personality is primarily a within-individual construct that helps to organize one’s behavior. Although personality can be associated with certain adaptations and behaviors that affect the outside world, personality itself is thought of as temporally stable (McCrae & Costa, 1999). Unlike identity development, there is not a stage of crisis regarding one’s base personality characteristics.

The five-factor model as proposed by Costa & McCrae contains the following traits: neuroticism, extroversion, openness to experience, agreeableness, and conscientiousness. In their descriptions of each trait, Costa and McCrae also include characteristic adaptations of individuals who score highly on particular traits. Neuroticism can be defined by a person whose experience is characterized by negative affect. Individuals who score high on neuroticism are prone to low self-esteem, irrational

perfectionistic beliefs, and pessimistic attitudes. High scores on Extroversion are associated with individuals who are gregarious, active in their communities, and who possess high levels of social skills. Openness to experience relates to an individual's openness to different activities, ideas, and appreciation of experiencing a variety of affective states. The agreeableness trait captures an individual's propensity toward compliance in interpersonal interactions. This trait is associated with forgiving attitudes, belief in cooperation, and inoffensive language. Finally, conscientiousness is an estimation of an individual's ability to plan and organize him/herself toward a purpose. Individuals who score highly on conscientiousness tend to be driven toward high levels of achievement.

There is a body of literature beyond the theory papers put forth by Costa and McCrae linking differences in trait scores from the five-factor model to differences in a variety of other within-person outcomes. Of particular interest for the purposes of this literature review are those outcomes that approximate differences in the way individuals process events and information. In this area, Batey et al. (2010) conducted a study measuring a construct they deemed *ideational behavior* (IB). IB was determined to be a measure of an individual's creativity, indicated by individual's self-reported tendency to generate novel and original ideas. Noting previous studies that had positively linked Extroversion and Openness to creativity (and Conscientiousness negatively), Batey and colleagues predicted similar relationships between these factors and ideational behavior. What they found was that above all other predictors, Openness accounted for the most variance in IB. This study is an example of how differences in personality factors can be reflected in differences in mental processes such as ideational behavior

Personality and Identity.

There is a body of literature that links personality to Berzonsky's identity styles as well as variables that are a product of neo-Eriksonian theory. A study by Marcia (1967) found that in comparison to individuals categorized by other identity statuses, the foreclosed individuals (who may employ a normative processing style and who are characterized by high levels of commitment and low levels of exploration) more easily acquiesced to demands made by an authority figure than did individuals of other statuses. This finding provides a theoretical base for hypothesizing about Agreeableness as one important factor in distinguishing Berzonsky's normative style from other styles, as Agreeableness is characterized by the propensity toward compliance in interpersonal relationships. One Iranian study by Moghanloo, Vafaie, and Shahraray (2008) found support for this hypothesis. Furthermore, they found that Openness significantly positively predicted the informational style and negatively predicted the normative style. The diffuse style was negatively predicted by Conscientiousness, which is also theoretically consistent, given the propensity of high-Conscientiousness individuals to plan and organize themselves toward a particular purpose.

Berzonsky (Berzonsky & Adams, 1999) also defined Openness to Experience as the most important distinguishing factor between the different identity styles. Some of Berzonsky's early research in this area led him to the idea that in facing forms of cognitive dissonance (including matters of identity), the normative style would be consistent with a strategy of assimilation, whereas the informational style would be more accommodating of new information (Berzonsky, 1992). Dollinger (1995) was one of the first to research this link. Using a sample of undergraduate psychology students,

Dollinger showed that Openness uniquely predicted the Informational style. Openness was negatively correlated with the normative style. The other personality traits were all moderately positively correlated with both the Informational and the normative styles, with the two styles themselves showing a moderate correlation. The investigator did note that a limitation of her study was its cross-sectional design, limiting the opportunity for speculation concerning the causal direction of the relationships that were uncovered.

Another study to link personality and identity style was conducted by Duriez et al. (2004). In their study, also using undergraduate psychology students (this time in Belgium), significant relationships were found between Openness to Experience and the identity styles. Consistent with prior research, Openness was positively correlated with the informational style and negatively correlated with the normative and diffuse styles. In a study quite similar to the present one, Dunkel, Papini, and Berzonsky (2008) found that the diffuse style was negatively correlated with Conscientiousness, the normative style was positively correlated with Conscientiousness, Extraversion, and Agreeableness, and the informational style was positively correlated to Openness and Conscientiousness.

Other studies linking neo-Eriksonian theory to personality variables include a more recent study by Crocetti, Rubini, and Meeus (2008). In a study of early and middle adolescents ($N = 1952$), personality and identity variables were considered together, uncovering a number of interesting findings. For example, a negative relationship between emotional stability (the inverse of Neuroticism) and in-depth exploration was found. In other words, exploration – something that is present for individuals using an informational style of identity processing – was associated with more anxiety and depressive symptoms. In addition, identity commitment – a measure that is present in

both information-oriented and normative individuals – was linked to less anxiety and depression (i.e., lower levels of Neuroticism) and positively related to Extroversion. In this study, personality factors were actually regressed on the identity variables – the inverse of the proposed relationship for the present study. However, the study employed cross-sectional data, so the relationship direction cannot be determined with certainty.

Luyckx, Soenens, and Goossens (2006) provided longitudinal data using a sample of female undergraduate psychology students that painted a similar picture of the relationship between personality and identity as did the Crocetti et al. (2008) study. High Extroversion and low Neuroticism both bore positive links to measures of identity commitment. Furthermore, Neuroticism positively predicted exploration. Interestingly, Luyckx et al. suggested that personality may not be crystallized by late adolescence. Their findings indicated that many of the concurrently related personality and identity factors could also serve to complement each other in analyses of change over time. A finding that diverged from the established literature was the lack of relationship between Openness and identity exploration variables.

In addition to their examination of personality variables, Dunkel, et al. (2008) also examined family characteristics. This is a relevant combination, as considering only within-person characteristics as predictors of later outcomes provides a limited view because it fails to take into account the influence of the environment that surrounds each person. Specifically, examining the role of family environment is important, given the notion that parents provide the social context within which children's behavior has some of its most important meanings (Bates & Pettit, 2007).

Family Environment

There is an extensive literature documenting the links between family environment and children's well-being. A substantial and more recent portion of this literature has focused on associations between various aspects of family life and adolescent behavioral and psychological development (Collins & Laursen, 2004; Compas, 2004). Among the family variables that have received study—and that seem particularly germane for understanding the role of family experience in identity development—are the degree of warmth and acceptance, autonomy granting / restriction, family conflict, and family changes and disruptions. In the review that follows, literature is summarized that describes connections between these aspects of family life and adolescent adjustment more generally and adolescent identity style more particularly.

Warmth and Acceptance

Children from families whose members engage with one another in shared activities and interactions characterized by warmth and acceptance tend to display more positive adjustment outcomes as they mature. Over time, if children and their parents develop a pattern of support and responsiveness toward one another, children's abilities to adapt to the changes of adolescence are facilitated. This adaptability may be due to the power of positive parent-child relationships to modify the impact of other sources of influence in a child's life (Collins & Laursen, 2004). Certain studies highlight the importance of warmth and acceptance as features of the parent-child relationship that bear links to developmental outcomes such as self-concept and interpersonal competence. Dekovic and Meeus (1997), for example, examined the links between parent-adolescent relationships and adolescent self-concept. Measures of the parent-adolescent relationship

included parental acceptance of the child, attachment (either secure or insecure), and parental involvement. The researchers uncovered that higher quality parent-adolescent relationships were positively associated with adolescents' self-esteem.

More specifically applicable to the focus of the present study is the consistent finding in the literature of a link between family cohesion and the normative identity processing style. In a study using a sample of 18-21 year old participants, Adams, Berzonsky, and Keating (2006) found that family cohesion, defined by items that rated how well the family "got along" or supported one another, was positively associated with the normative style. They posited that such a linkage is likely to be adaptive to the degree that individuals using a normative processing style are attentive to immediate social norms, conventions, and expectations. In the context of a close-knit family, an individual who maintained attentiveness to family rules and expectations would contribute to the sense of cohesion.

In their study of identity style and parent-adolescent relationships (as perceived by the adolescent), Berzonsky, Branje, and Meeus (2007) report similar findings. While the informational style was modestly associated with open communication within the family (zero-order correlation of .14, significant at $p < .05$), the normative style had an even stronger correlation (.28, significant at $p < .01$) with open communication within the family. This provides further evidence for the notion of normative individuals coming from close-knit or cohesive families. Diffuse-avoidance was not associated with any of the parental behavior variables, but was strongly negatively associated with adolescent disclosure to parents, commitment, and self-regulation. This finding echoes results from a study by Reis and Youniss (2004) that found a negative relationship between parent-

adolescent communication and identity diffusion (measured with Marica's status approach). A study by Matheis and Adams (2004) provided a similar description of both normative and diffuse-avoidant individuals' family environments; normative scores were linked to family cohesion (indexed by measures of affection between parents and children as well as being able to communicate in a positive way), and diffuse-avoidance was associated with lower levels of family expressiveness. Dunkel et al. (2008) reported no associations with family functioning for the informational style, but did report that closeness with mothers was positively predicting the normative style and negatively predicting the diffuse style. In another study, Soenens, Berzonsky, Dunkel, and Papini (2011) reported similar findings concerning the normative style and parental warmth.

As is apparent from the preceding review, low levels of family warmth and acceptance are associated with a number of negative intra- and interpersonal outcomes in childhood and adolescence. It should be noted, however, that there is a normative decline in the amount of positive emotionality in the parent child relationship during early adolescence (Collins & Laursen, 2004). This decline co-occurs with an increase in young adolescents' strivings for independence. Family rules and responsibilities are renegotiated (Collins & Laursen, 2004; Laursen & Collins, 2004). Families must grapple with this transition in relationship dynamics through balancing the level of autonomy in daily decisions allowed a child.

Autonomy Granting / Restriction

The authoritative parenting style is associated with positive outcomes and is characterized partly in terms of clear rules and expectations and open communication, as opposed to unilateral parental decision-making (Baumrind, 1991; Lansford, Criss, Pettit,

Dodge, & Bates, 2003; Steinberg, Elmen, & Mounts, 1989). Baumrind (1991) linked an authoritative parenting style (characterized by the combination of warm, supportive interaction with firm rules and expectations of adolescents) to a reduced level of internalizing and externalizing behaviors as well as a high level of motivation and achievement. Steinberg et al. (1989) found that parental acceptance and granting of psychological autonomy were predictive of psychosocial maturity in adolescents, as was parental behavioral control. Parents who employ this style provide their adolescents with opportunities to make certain decisions on their own, characteristics that are predictive of positive adolescent adjustment (Van Petegem, Beyers, Vansteenkiste, & Soenens, 2012).

Support of independent decision-making is not to be confused with permissiveness. Similar to the findings reported by Repetti and Taylor (2002). Dishion, Nelson, and Bullock (2004) found that parents' disengagement in adolescence (*premature* granting of autonomy) leaves children open to antisocial behaviors such as marijuana use and antisocial behavior. This is understandable, given the propensity for adolescents to be more affected by their peers' behavior if there is a distant and inflexible family relationship (Collins & Lauren, 2004). However, an appropriately timed phasing-in of autonomy is associated with positive outcomes. Smits, Soenens, Vansteenkiste, Luyckx, and Goossens (2010) found that autonomous motives behind one's identity positively predicted commitment and well-being. These individuals were not pressured by their parents into operating in any particular way. One limitation of the study was that parenting and adolescent outcomes were measured cross-sectionally. The researchers called for a study with the potential for temporal ordering of events to identify developmental precursors of identity style.

Building upon literature examining how much control parents have over their adolescents' lives, Beyers and Goossens (2008) add identity formation to the areas of potential parental influence. Their study suggests that on the whole, parents do have an influence on the within-individual process of identity formation. Sampling a population of first- and second- year undergraduates, their study highlighted the role of mothers in fostering commitment to identity in adolescents and the role of fathers in enhancing exploration of identity. "Supportive" parenting scales were developed based on high responsiveness and autonomy support and low behavioral and psychological control. Upon analysis, measures of supportive mothering were positively correlated with adolescent commitments to identity, whereas measures of supportive fathering bore negative correlations to commitments and positive correlations to broad exploration of identity. This finding serves to clarify the finding by Reis and Youniss (2004) that adolescents' communication with their mothers was inversely related to identity diffusion over three years. This can be understood keeping in mind Beyers' and Goossens' (2008) finding that mothers help their children to foster *commitments* to identity.

In another study on a sample of undergraduate students by Soenens, Berzonsky, Dunkel, and Papini (2011), parental support of autonomy was found to be related only to the diffuse style (negatively). The researchers hypothesized that the more manipulative and controlling a parent was perceived to be, the more ill-equipped an individual was to face the challenges of identity formation. Interestingly, they did not confirm their hypothesis concerning a positive relationship between parental autonomy support and the informational identity processing style. The researchers called for further studies to clarify these findings.

Conflict

While the previous sections focus on aspects of family relations that have a positive connotation (warmth, cooperation), there is also much research on the relationship between family conflicts and children's outcomes. There is no doubt in the power that conflict has in predicting various forms of maladjustment. Parental conflict and interparental violence has been shown in various studies to predict later antisocial behavior on the part of the children witnessing this conflict (Farrington, 2004). Family conflict has been examined as a correlate of identity development in adolescents.

Missotten, Luycx, Branje, Vanhalst, and Goossens (2011) studied the connection between conflict in the family and adolescents' identity styles. Using a sample of 796 adolescents, they predicted that the informational style's open and empathic stance would be associated with less conflict, measured by adolescents' ratings of the frequency of conflict over the past week about specific topics related to the adolescents' behavior. Similarly, they predicted a reduced amount of conflict for the normative style given its compliant stance (reminiscent of Marcia's (1967) findings regarding foreclosed individuals – namely that they easily acquiesce to the demands of authority figures). They anticipated a positive relationship between conflict frequency and the diffuse style, given the diffuse style's propensity toward procrastination and living in the present. Their hypotheses, save their prediction regarding the normative style, were confirmed. Regarding this discrepancy, the author posited that some of these normatively-styled individuals may have been pressured into the use of that style by authoritarian parents rather than having autonomously chosen it. This could be a source of conflict for those

individuals. Given the study's cross-sectional design, the researchers suggested a study involving separate measurement time points to further examine these dynamics.

Despite the findings by Missotten et al., the literature is inconsistent on the effect of conflict on identity style, with Matheis and Adams (2004) finding no such relationship. However, in Matheis' and Adams' study, there were no specific ratings of frequency of conflict. Rather, parent-adolescent conflict was measured in a subscale of their family environment measure. The adolescents rated agreement to subjective statements such as "we fight a lot" or "family members hardly ever lose their tempers" rather than specifically rating conflict frequency. In another study of 164 female undergraduates, Perosa, Perosa, and Tam (1996) examined the relationship between various aspects of family structure (including a measure of the family's propensity to engage in conflict) and identity development. The measure of identity in this study was the identity status model. In the course of their analyses, the researchers found that their scale of conflict was a significant contributor to the maintenance of proper boundaries between family members. The researchers argued that this could allow for the balance of autonomy and connection that fosters identity development. Further research is necessary to clarify these discordant findings, thus the predictions presented in this study will be exploratory.

Changes and Disruptions

An area that has received little attention in the literature is the effects on adolescents' identity formation coming from an inconsistent or unpredictable environment. There is an extant literature on stressful life events (e.g., Graber, 2004; McLaughlin & Hatzenbuehler, 2009) indicating that these events, characterized by the experience of an undesirable or inescapably negative event, are associated with the

development of anxiety disorders and a general sensitivity to anxiety. For children, the severe illness of a caregiver, a move from the childhood home, or a change in school could all be interpreted as a stressful life event. These are all events over which the child has potentially little or no control, but that have the power to profoundly change the course of a child's development.

When a child is not in an environment that could be characterized by structure and predictability, the child suffers. In a study conducted using a younger population (grades 3-5), Evans, Gonnella, Marcynyszyn, Gentile, and Salpekar (2005) found that lack of structure and general unpredictability of routines at home mediated the relationship between low socioeconomic status and a lack of self-efficacy. Given the relationship between external changes and disruptions and psychological well-being, one might expect that the greater the disruption, the more likely one is to be unwilling or unready to process identity-relevant information – a characteristic of the diffuse processing style. On the opposite end of the spectrum, an individual whose life has been characterized by very few changes and disruptions within the family may be predisposed toward an identity processing style that may be slightly less flexible or open to different experience – a feature of the normative style. An individual who has experienced a moderate amount of change may be predisposed toward an informational style, which is characterized by flexibility of commitments.

Summary

The literature points toward certain meaningful developmental precursors to identity style. One area that has received some attention is the area of personality. Openness to Experience has often been cited as an important distinguishing factor

between the informational style and other styles, with mixed findings linking Neuroticism, Agreeableness, and Conscientiousness to the prediction of the other styles. In addition to personality, early environmental variables have proven useful in predicting the different identity styles. A cohesive family environment – one characterized by warm, close interaction and felt support from both parents – has been strongly associated with a normative processing style, and to a lesser extent, the informational style. What has distinguished the informational style from the normative in terms of family environment has been a more collaborative or cooperative style of parenting and a reduced amount of family conflict. The diffuse style, being characterized by a lack of desire to process or commit to any identity-relevant information, would likely be linked to a chaotic, anxiety-inducing environment as well as a high-conflict family background.

While each of these individual areas has received a good deal empirical attention, there have been few studies to examine personality and family life together. The study by Dunkel, Papini, and Berzonsky (2008) is pioneering in this respect. However, much of the research on precursors, including the Dunkel et al. (2008) study, has been cross-sectional in nature. This study aimed to add to the literature via a design in which various realms of individual and environmental influence that temporally precede a measure of identity were examined together.

Developmental Sequelae of Identity Style

The formation of a strong identity has long been acknowledged as an important task in ensuring future developmental successes or failures (Erikson, 1968). In terms of neo-Eriksonian research, there has been considerable attention paid to the outcomes associated with identity development. For example, in a review of the most current

literature on identity, Meeus (2011) reported that more mature levels of identity commitment and exploration predict less anxiety, more well-being, and warmer parenting when participants had children of their own. Individuals with a more committed, maturely developed identity showed more positive outcomes on a variety of individual measures. One study of specific individual outcomes, conducted by Seaton and Beaumont (2008) on a sample of 300 undergraduates, found that the informational style of identity processing carried advantages over the normative style in terms of proactive coping, curiosity, and exploration. Consistent with many prior studies, the diffuse processing style bore mostly negative relationships with all of the researcher's measures of positive adjustment.

In a similar study on undergraduates (this time in Belgium), Soenens et al. (2005) found that the informational identity style was positively correlated with problem-focused coping strategies. The informational style was also linked to higher levels of empathy. The normative identity style showed relations to measures of prejudice and conservatism. The researchers explain this finding in that users of this style are more passive and obedient toward authority rather than being domineering. With respect to the diffuse/avoidant identity style, there were a couple strong relations: one to avoidance coping tactics and another to emotion-focused coping. The researchers consider these tactics to be inferior to problem-focused coping.

Beyond general measures of well-being and adjustment, identity is often researched in the context of interpersonal outcomes. In fact, in the stage following identity development in Erikson's model of psychosocial development (intimacy versus isolation), social objectives are of prime importance. Other researchers recognize the

importance of maintaining strong social connections. While there is some methodological confusion over the usage and definition of the word “connection” and its derivatives, there is clear evidence for its linkage to positive outcomes. Defined as the feeling of a perceived bond with significant other persons, social connection has a negative relationship with violence, substance abuse, and other forms of delinquency (Barber & Schluterman, 2008). Most important is the development of lasting intimate relationships. Montgomery (2005) found that identity, measured according to the Erikson Psycho-Social Index, predicted intimacy; the more developed an individual’s identity was, the more intimacy they reported in their romantic relationships. In a similar vein, Zimmer-Gembeck and Petherick (2006) found that a more solid foundation in certain aspects of identity can lead to clearer goals for dating in emerging adulthood. Their study, which focused on adolescents between 17 and 21 years of age, highlighted the contribution of having completed a more thorough exploration of vocational and sex-role identities before seeking romantic relationships. Specifically, this exploration and development contributed to measures of later relationship satisfaction. The Zimmer-Gembeck and Petherick study does not entirely confirm Erikson’s ordering of identity before intimacy, suggesting that identity and intimacy co-evolve during both adolescence and early adulthood. However, other research has supported Erikson’s ordering, with findings that true intimacy is not achieved until emerging adulthood (Beyers & Seiffge-Krenke, 2010).

While prior sections of this review addressed family relationships’ associations with identity, other types of relationships are also linked to identity. In a study of undergraduate college students, Kerpelman and Pittman (2001) found that significant others in participants’ lives have the ability to help regulate identity-related processes.

These significant others could be either a same-sex friend or an opposite-sex dating partner. In this study, participants' desires to have a certain identity (family-oriented, successful marital partner, career success) were catalogued. The participants were then provided with discrepant feedback regarding their "optimal" identity. Partners' reactions – most notably if the partner rejected the discrepant feedback - actually helped to reduce the amount of identity instability. These findings suggest that identity processes affect interpersonal relationships and in turn are affected by those relationships.

Identity and Social Capital

Whereas intimate relationships are highly salient during late adolescence and early adulthood, they are not the only important relationship contexts that have an impact on adjustment and well-being. Qualities of family relationships continue to be important (Collins & Laursen, 2004), as do friendship networks (Brown, 2004). The broader social networks comprising these relationship domains may be characterized in terms of their depth (quality) and breadth (extensiveness). The construct of social capital provides a useful framework for understanding these relationship dynamics.

For the purposes of this review, social capital was defined as the relational resources that an individual may call upon in order to facilitate certain actions (Coleman, 1988). In laying the groundwork for research on social capital, Coleman identified several elements that can be considered as defining social capital. Obligations and expectations are some of these elements. An individual, in his or her relationships with others, will accumulate a certain amount of social "credit slips" as a result of the quality of the relationship. In other words, as relationships build, an individual can expect that a friend or significant other can be called upon for assistance when needed. A prime

example of social capital's facilitative effects came in Coleman's (1988) study on high school dropout rates. He found that even if parents who possess highly valuable talents or skills for a child's development are present at home, the lack of a strong relationship (i.e., lack of social capital) will prevent these valuable skills from being utilized. Social capital, then, can be understood in its facilitative potential – the quality of interpersonal relationships making possible the utilization of valuable human resources.

A number of studies have established that social capital is predictive of adjustment and well-being across the lifespan and in a variety of samples (e.g., Jager, 2011; Pettit, Erath, Lansford, Dodge, and Bates, 2011; Wu, Palinkas, & He, 2011). The seminal study by Furstenburg and Hughes (1995) is illustrative in this regard. Furstenburg and Hughes (1995) studied a sample of mostly disadvantaged African-American youth. Social capital was defined in terms of the within-family social capital (parental investment in youth, support from extended family) and family's possession of social capital in the community (mother's involvement in community groups, church, friends). They found that over time, social capital was related to these youth improving their socioeconomic conditions. This is in line with Coleman's conception of social capital as facilitating the use of others' abilities and skills to make possible actions that may not have been possible otherwise. Improvement in socioeconomic status is a prime example of this phenomenon.

The dimensions and consequences of social capital recently were the focus of a special issue of the *International Journal of Behavioral Development* (Pettit & Collins, 2011). The need to distinguish between depth (quality) and breadth (extensiveness) was noted by the authors of several articles appearing in the special issue. Pettit, Erath,

Lansford, Dodge, and Bates (2011) explicitly tested the hypothesis that breadth and depth would have both overlapping and distinct developmental outcomes. Using the same sample as that in the current proposal, age-22 social capital breadth was defined as the extensivity of the participant's friendship network and social capital depth was defined as the combined measures of parent-child, romantic partner, and best-friend relationship quality. A variety of adjustment outcomes were assessed at age 24. Outcomes included internalizing and externalizing behaviors, arrests, and illicit substance use. The researchers discovered that the quality (depth) of social capital had more positive effects on individuals' adjustment than did breadth of social capital. In fact, once depth was taken into account, breadth of social capital bore positive associations with externalizing, arrests, and drug abuse.

Also emphasizing the importance of relationship quality, Englund et al. (2011) state that the establishment of high-quality, age-appropriate relationships can be seen as both an indicator of present adaptation as well as a predictor of future adaptation. These researchers implicate earlier developmental processes (namely attachment security) in the establishment of the ability to acquire and utilize later social capital. However, the paradigms of attachment and identity show enough similarity (Pittman, Keiley, Kerpelman, & Vaughn, 2011) that the findings produced by Englund et al. retain their significance for the present study. Furthermore, attachment security represents a quality of family relationships, something the present study considers. Englund et al. tested and found support for a model wherein early family relations were mediated through romantic relationship effectiveness, each of which was construed as a developmentally appropriate

indicator of social capital, to several measures of well-being, including questions concerning engagement in work, close relationships, and robustness of mental health.

Despite the above studies' emphasis on quality over quantity, there exists research that continues to examine both in detail. For example, in their research on 336 Finns from childhood through adulthood, Pulkkinen, Lyyra, and Kokko (2011) studied the relationship between social capital in early adulthood and later measures of psychological well-being and social functioning. These measures included self-reported satisfaction with life, sense of coherence, depression, and alcoholism. The researchers found that both breadth and depth of social capital had positive associations with psychological well-being and sense of coherence (a measure indicative of identity, with items such as, "How often do you have feelings that you are in an unfamiliar situation and do not know what to do?"). In addition, breadth bore a negative association with aggression for some participants.

Summary

Identity bears associations with a variety of outcomes in early adulthood, including several indicators of social functioning, including empathic ability and the possession of clear goals for dating. The framework of social capital provides a useful lens for organizing the early adulthood implications of adolescent measures of identity style. In addition, the realms of identity and social capital have not as of yet been considered simultaneously in the existing research. Little has been uncovered as to how different identity processing styles can affect the utilization of social capital. Beyond this aspect of novelty, the use of social capital as an outcome would help to address the need

for positive outcome research with respect to identity styles, especially in the distinction between the normative and informational styles (Seaton & Beaumont, 2008).

Goals of the Present Study

One of the prime goals of this study was the integration of multiple theories of development in the analysis of pathways from childhood and earlier adolescent experience to later social adjustment. The literature has just begun to see studies (one being Dunkel, Papini, & Berzonsky, 2008) examining earlier individual characteristics, family environment, and later identity style all together. As many researchers have noted, the cross-sectional examination of findings has been a limitation in the past. In addition, the domains of identity research and social capital have not yet been examined in the same study. As identity processing style is a neo-Eriksonian construct, and Erikson emphasized the importance of creating social connection in early adulthood, the two domains seem appropriate for examination in the same study. The present study had an advantage in its power to examine these variables in the same sample over several years.

Given the preceding review, the following questions were examined:

1) Is identity style at age 16 predicted:

- a. By personality at age 12? It was expected that Openness to Experience would predict the informational style and negatively predict the normative style (reminiscent of Berzonsky, Ciecuch, Duriez, & Soenens, 2011). It was expected that Neuroticism would predict the diffuse-avoidant style. Agreeableness was hypothesized to predict the normative style. Conscientiousness was hypothesized to predict both the normative and

informational styles, and negatively predict the diffuse style. Extroversion was hypothesized to predict the informational style.

- b.* By family environment at age 13? It was expected that a family environment characterized by less restriction of autonomy would predict the informational style uniquely. It was expected that family warmth and acceptance would predict both the informational style and the normative style (as in Dunkel, Papini, & Berzonsky, 2008). Conflict in the family was expected to predict the diffuse style (as in Missotten et al., 2011). Changes and disruptions was expected to have a nonlinear relationship with the identity styles, with a low level being predictive of the normative style, a medium level predicting the informational style, and a high level predicting the diffuse style.

2) Is social capital at age 23 predicted:

- a.* By identity style? It was anticipated that:
- i.* the informational style would be predictive of social capital breadth and depth in all three domains (best-friend, romantic partner, family).
 - ii.* the normative style would be predictive of depth in the romantic partner and family realms.
 - iii.* the diffuse-avoidant style would be negatively predictive of breadth and depth in all three domains.

III. Method

Sample

The sample for the current study came from the data collected for the Child Development Project, an ongoing, multisite, longitudinal study examining various indices of children's socialization processes (Dodge, Bates, & Pettit, 1990; Pettit, Lansford, Malone, Dodge, Bates, 2010). Participants were recruited primarily (85%) at two separate pre-registrations for kindergarten – one during 1987 and the next in 1988. During the events, research assistants asked parents at random if they would like to take part in a multi-year study of child development. Of those parents approached, 70% agreed to participate. The minority of parents that did not participate in kindergarten preregistration (15%) were contacted on the first day of school via telephone, mail, or at the schools. The initial sample included 585 families. Parents were interviewed for the first time during the summer prior to kindergarten and continued to complete assessments each following year. Later assessments include contributions from children and parents, as well as best friends and romantic partners. The initial sample showed an average amount of diversity of sex and ethnic distribution, given the regions sampled (52% male, 80% European-American, 18% African American, 2% other ethnicity). The mean Hollingshead Four-Factor Index of Socioeconomic Status (1979) was 39.5 with a standard deviation of 14.1, indicating a mostly middle-class sample with a good deal of variability.

Measures

Identity Style

At age 16, participants filled out the 24-item Identity Style Inventory. The measure of identity style used in the present study is an adaptation of Berzonsky's ISI-3 (Berzonsky, 1992). The changes include the omission of several questions related to specific content areas such as religion, politics, and academic major. Included from the original inventory are 6 items from each subscale of identity (e.g., *informational*: "Your problems can be interesting challenges," *normative*: "You were brought up to know what to work for," and *diffuse*: "You're not sure what you're doing in life."). Further modification included the simplification of some of the statements. For example, item 6 from Berzonsky's ISI-3 ("When I discuss an issue with someone, I try to assume their point of view and see the problem from their perspective") was simplified to "When you talk with someone about a problem, you try to see their point of view." The identity style subscales are: 1. Informational style (6 items, $\alpha = .62$); 2. Normative style (6 items, $\alpha = .58$); 3. Diffuse style (6 items $\alpha = .62$); 4 Commitment (6 items, $\alpha = .57$). These reliability scores are similar to those reported when Berzonsky (1989) was developing and validating his measure.

Precursors to Identity

Personality

Personality was assessed at age 12, using the 25-item Big Five Personality Questionnaire (Lanthier, 1995). This questionnaire assesses dimensions of personality that are similar in form to Costa & McCrae's (1992) Big Five. Children used a 5-point scale to indicate how well each item described them (1 = hardly at all to 5 = extremely

much). Five composites (each containing five items) were constructed by averaging the items within that composite. The composites include Extroversion (e.g., spirited, gregarious; $\alpha = .63$); 2. Agreeableness (e.g., easygoing, courteous; $\alpha = .55$); 3. Conscientiousness (e.g., organized, thoughtful; $\alpha = .63$); 4. Neuroticism (e.g., characterized by negative emotion; $\alpha = .58$); 5. Openness (e.g., inventive, creative; $\alpha = .67$).

Family Environment

Autonomy Restriction. A twelve-item index of the level of autonomy restriction was gathered at age 13, based on a metric developed by Steinberg et al. (1989). This instrument assessed the degree to which the child had control over decisions related to daily activities (e.g., what movies to see, when to go to bed, what food to eat) for him- or herself, as reported by parents. Parents rated the degree of joint, unilateral parent, and unilateral adolescent decision-making across various areas in the family. Of interest for the present study was whether the child had any say in these choices. Thus, the responses were recoded to show that either the parent controlled all decisions (with a score of 1) or the child had any amount of say in the decision (score of 0). The maximum score for this measure would be 12.

Warmth and Acceptance. The level of positive sentiment in participants' families was indexed using a 3-item scale with acceptable levels of internal consistency ($\alpha = .68$) from the parent interview during year 9 of data collection (child was 13). The items are: 1. "In general, how enjoyable are [activities that you do with your child] for you?" (ratings from 1 = not at all to 5 = very much) 2. "How well do you and the child get along?" (ratings from 1 = not well at all to 5 = very well) 3. "How enjoyable is it for

you to spend time with the child?” (ratings from 1 = not at all enjoyable to 5 = extremely).

Conflict. Data on the degree of conflict within the household were collected from parent reports when the child was 13 years of age. Using items from the Conflict Tactics Scale (Straus, 1979), parents rated the child’s exposure over the past year to each of the styles of conflict within the scale. The subtypes of aggression measured within this scale included verbal aggression (e.g., “yelled, insulted, or swore”), psychological aggression, (e.g., “sulked or refused to talk”), and physical aggression (e.g., “pushed, grabbed, or shoved”). The questions were asked separately for conflict between parents, conflict between parent and other adult, and conflict between parents and children. An overall index of conflict will be created by averaging across parent dyads within each type of conflict, then averaging the styles to create a single overall family conflict score.

Changes and disruptions. The level of change and disruption in each participant’s childhood was assessed using the changes and adjustment questionnaire (Dodge, Pettit, & Bates, 1994). This questionnaire was presented to participants’ caregivers at age 14. The questionnaire contained a list of 10 major stressors, such as death of family member, divorce, and severe illness. An overall score of changes and disruptions will be calculated by summing the total number of stressors that the caregiver has indicated the child experienced.

Outcomes of Identity

Social Capital Depth

All social capital measures were assessed using self-report from participants when they were 22 years of age. Three distinct areas of social capital depth were measured –

family, romantic partner, and best friend relationships. Family social capital is represented in this study by three aspects of relationships with parents: 1. Global relationship quality (1 = *really bad* and 10 = *absolutely perfect*); 2. Support (e.g., “How much does your mother [father] act as an advisor/mentor?”) on a scale of 1 = *never* to 5 = *a lot of the time*; 3. Positive involvement (e.g., “How often does your mother [father] talk with you about ordinary daily events in your life?”) on a scale from 1 = *never* to 5 = *very frequently*. Each aspect of social capital depth was measured separately for mothers and fathers. However, the measures were correlated with one another, so overall indexes of parental relationship quality, support, and involvement were created.

Romantic partner social capital was derived from the four measures within the Dyadic Adjustment Scale (Spanier, 1976). The measures included: *Satisfaction* (e.g., “How often do you think that things between you and your partner are going well?” $\alpha = .87$); *Consensus* (e.g., “Most persons have disagreements in their relationships. Please indicate the approximate extent of agreement or disagreement between you and your partner when handling family finances,” $\alpha = .84$); *Cohesion* (e.g., “Do you and your mate engage in outside interests together?” $\alpha = .71$); *Affection Expression* (e.g., “Indicate if either item caused differences of opinions or were problems in your relationship during the past few weeks: being too tired for sex or not showing love,” $\alpha = .61$).

Best-friend relationship quality was assessed using three interview items (“Friend would help if you needed it”; “Could tell friend about a problem”; “Feel happy when you are with friend.”) where participants could indicate agreement on a scale from 1 = *strongly disagree* to 5 = *strongly agree*. Participants responded to a fourth item (“Gets along with friend”), indicating agreement on a 5-point scale ranging from 1 = *not well at*

all to 5 = very well.

Social Capital Breadth

The breadth of social capital is related to the extensivity of one's social network. This characteristic was measured by the participants' reports of how many friends they could rely on for advice or help if they were in need. The maximum number of friends was capped at 10 in order to reduce the potential for skew.

IV. Results

A main aim of this study was to expand upon prior research examining the unique contributions of personality and family environment characteristics to the use of various identity processing styles. In addition, the present study aimed to expand the literature linking identity styles to social network breadth and depth within the interpersonal realms of best friendship, family, and romantic partners. While all of the research questions posed were theoretically driven, some were tentative in nature, given the novelty of their inclusion in the literature on identity development. This section will first cover certain preliminary analyses and then will proceed to the results concerning specific research questions.

Preliminary Analyses

Descriptive statistics are presented in Table 1. Five of the 17 variables considered in the present study carried skewness values higher than 1. These five variables were the informational style scores, family cohesion, autonomy restriction, family conflict, and best friendship quality. Inspection of distributions of these variables revealed twelve out of 410 recorded responses to be extreme (greater than 3 standard deviations from the mean) cases only for family conflict. Deleting these cases produced no meaningful difference in regression coefficients or their significances, so the values were left in the dataset. In addition, log transformations of the skewed variables did not substantially

change the results for the analyses reported below. For ease of interpretation, non-transformed scores were used.

Participants in this study tended to score in the middle range of values for commitment as well as the informational and normative styles. On average, participants scored on the low end of the diffuse-avoidant style. With the exception of Neuroticism, participants tended to score in the medium-high range on all measures of personality. The average score of Neuroticism was in the middle of the range. Participants reported very cohesive families, on average, with correspondingly low levels of conflict. Autonomy restriction and scores for the amount of chaos experienced were on the lower end of the range. The social capital scores for romantic relationship depth and friendship breadth were middling, whereas the scores for best friendship quality and parent relationship quality tended to be on the higher end of the distribution.

Bivariate associations between variables were examined, the results of which are summarized in Tables 2, 3, and 4. As expected, the identity styles were correlated with one another in a manner similar to that reported in other studies (e.g., Adams, Berzonsky, & Keating, 2006). At higher scores of informational style, the scores for the normative style were higher and the scores for the diffuse style were lower. Higher levels of the normative style were also associated with higher scores of the diffuse style. Commitment was positively related to informational and normative styles and negatively related to the diffuse style.

The pattern of correlations for identity styles with the personality variables was mostly as expected. Higher levels of Openness were associated with lower scores of the normative style. At higher levels of Neuroticism, both the normative and diffuse scores

tended to be higher. There was a significant positive correlation between Conscientiousness and the normative style and a significant negative correlation between Conscientiousness and the diffuse style. In addition, there was a trending positive correlation between Conscientiousness and the informational style. There were no significant correlations between the identity styles and either Extroversion or Agreeableness, though there was a trend toward a negative association between the diffuse style and Agreeableness.

The correlations between family environment characteristics and the identity styles were mostly non-significant. Notable exceptions include correlations between the behavioral control measure and the normative and diffuse styles. At higher levels of autonomy restriction, there tended to be higher scores on the normative style.

Table 4 summarizes the correlations between the identity styles and the social capital outcome variables. The informational style was significantly positively correlated with parent-child relationship quality at age 22, with a trend also toward a positive correlation with best friendship quality. The normative style was significantly positively correlated to both romantic relationship quality and parent-child relationship quality. The diffuse style was negatively correlated with best friendship quality and social network breadth.

Analyses Addressing the Primary Research Questions

Analysis Overview.

Two kinds of analysis were conducted to assess predictions of identity styles from personality and family environment variables. First, to determine whether personality significantly incremented the prediction of identity styles above and beyond the family

measures, regression analyses in SPSS were conducted in which family variables were entered first, followed by the personality variables. An analogous analysis was run to assess whether family variables incrementally predicted identity styles above and beyond personality variables. In each set of analyses, participants' gender and levels of identity commitment were included as co-variates, as well as the "alternate" identity styles (e.g., in the prediction of normative style, diffuse and informational styles were treated as controls).

A second kind of analysis of predictors of identity style was performed with Amos (Arbuckle & Wothke, 1999) with full information maximum likelihood (FIML) for missing data. This analysis was conducted because the present study, like all long-term longitudinal studies, has missing data at different ages. It was of interest to see whether the Amos findings converged with those in the SPSS findings (i.e., final-step betas). As in the SPSS analyses, gender, commitment, and the alternative identity styles were entered as a controls. The family variables and personality measures were entered simultaneously. Predictor analyses are summarized in Tables 5, 6, and 7.

For the analyses predicting to social-capital measures from identity styles only Amos with FIML was used, as there was no theoretical reason to enter each of the styles step by step in the prediction of the various domains of social capital. The goal was to analyze unique contributions of the styles to each domain of social capital above and beyond the contributions of other styles. The results are summarized in Table 8. As in the preceding analyses, gender and commitment served as controls. All three identity style measures were entered simultaneously. Separate analyses were run with romantic quality,

best friendship quality, parent relationship quality, and social capital breadth (number of friends) as the dependent variable.

Is identity predicted by personality at age 12?

In each analysis, the control variables (gender, commitment, and the alternate styles) accounted for significant portions of variance in identity style. Findings in the prediction of identity from personality did not differ between SPSS (Tables 5 and 6) and AMOS (Table 7), i.e., coefficients that were significant or near-significant in the SPSS analyses also were significant or near-significant in the AMOS analyses. Coefficients are standardized for ease of interpretation.

Informational Style

The ΔR^2 statistic was not significant for predicting the informational style whether personality variables were entered in the second (i.e., after the controls) or third (i.e., after the family variables) block of predictors (see Tables 5 and 6). Thus, contrary to expectation, none of the personality variables were predictive of the informational style.

Normative Style

Personality variables entered as the second block of predictors explained a significant 4% of the variance. High levels of conscientiousness ($\beta = .13, p < .01$) and low levels of Openness ($\beta = -.15, p < .01$) were significantly related to the normative style (Table 5). When personality variables were entered as the third block of predictors (Table 6), they accounted for an additional 2.5% of the variance, which was significant. Conscientiousness ($\beta = .11, p < .05$) and Openness ($\beta = -.12, p < .01$) remained significant. As expected, the normative style was significantly predicted by higher levels

of Conscientiousness and lower levels of Openness. Unexpectedly, higher levels of Neuroticism marginally predicted higher levels of the normative style.

Diffuse-Avoidant Style

Personality variables entered as the second block of predictors explained a significant 2.5% of the variance. Conscientiousness ($\beta = -.13, p < .01$) was the significant variable. When personality variables were entered as the third block of predictors, they accounted for an additional 2.3% of the variance. Conscientiousness ($\beta = -.12, p < .05$) remained significant. Thus, consistent with expectation, lower levels of Conscientiousness predicted higher levels of the diffuse style.

Is identity predicted by family environment at age 13?

Informational Style

Family variables entered as the second (see Table 6) block of predictors accounted for a significant 3.2% of variance above the control variables. Entered third (see Table 5), family variables accounted for a significant additional 3.3% of the variance over the personality variables. As predicted, lower levels of autonomy restriction were significantly related (entered as second block: $\beta = -.14, p < .01$; entered third: $\beta = -.14, p < .01$) to higher levels of the informational processing style. Contrary to expectations, family warmth negatively predicted the informational style (entered second: $\beta = -.10, p < .05$; entered third: $\beta = -.12, p < .05$). This finding was only marginally significant when the data were analyzed using AMOS (see Table 7). In order to ascertain the existence of a non-linear relationship between family changes and the informational style, an analysis of variance was conducted in which family changes were recoded as high, medium, and low. The analysis produced no significant findings related to the informational style and

changes and disruptions. At each level of change and disruption, the means were not significantly different (low change = 23.25; mid change = 23.72; high change = 23.72).

Normative Style

Family variables entered as the second (see Table 6) block of predictors accounted for a significant 5.5% of variance above the control variables. Entered third (see Table 5), family variables accounted for a significant additional 4.3% of the variance over the personality variables. Higher levels of the normative style were significantly predicted by higher levels of family warmth (entered as second block: $\beta = .18, p < .001$; entered third: $\beta = .16, p < .001$) and higher levels of autonomy restriction (entered as second block: $\beta = .15, p < .01$; entered third: $\beta = .14, p < .01$). An analysis of variance produced no significant findings related to the normative style and changes and disruptions. At each level of change and disruption, the means were not significantly different (low change = 20.56; mid change = 20.58; high change = 20.27).

Diffuse-Avoidant Style

Contrary to expectation, neither family conflict nor changes and disruptions predicted the diffuse-avoidant style. When entered in the second (see Table 6) block of predictors in SPSS, this block of predictors did not significantly account for more variance than the control variables. However, in this block, lower family warmth was marginally associated with higher levels of the diffuse-avoidant style ($\beta = -.08, p < .10$). In addition, the analyses using AMOS (see Table 7) did not reveal such a trend. An analysis of variance produced no significant findings related to the diffuse style and changes and disruptions. At each level of change and disruption, the means were not significantly different (low change = 15.61; mid change = 16.23; high change = 15.90).

Is social capital at age 22 predicted by identity style at age 16?

Social Capital Breadth

Regression analyses in AMOS (see Table 8 for a summary of all the following results pertaining to social capital) revealed that social capital breadth (number of friends) was significantly predicted only by the diffuse style ($\beta = -.13, p < .01$). As expected, the relationship was negative. In addition, there was a marginally significant positive relationship between the informational style and social capital breadth.

Family Social Capital Depth

Social capital depth in the parent domain was significantly associated with all three of the identity styles. At higher levels of the informational ($\beta = .18, p < .001$) and normative styles ($\beta = .12, p < .05$), there were significantly higher levels of parent relationship depth. At higher levels of the diffuse style, there were significantly lower levels of parent relationships depth ($\beta = -.12, p < .05$).

Romantic Social Capital Depth

Depth of social capital in the romantic realm was significantly predicted by the normative style. At higher levels of the normative processing style, there were significantly higher levels of romantic social capital depth ($\beta = .20, p < .001$). Also in line with predictions was the significant negative relationship between the diffuse style and romantic social capital depth ($\beta = -.14, p < .05$). Contrary to predictions, there was no link between the informational style and romantic social capital.

Friendship Social Capital Depth

Finally, best friendship social capital depth was predicted only by the diffuse style. At higher levels of the diffuse identity processing style, there were significantly

lower levels of depth in best friendship social capital ($\beta = -.14, p < .05$). The predicted link between the informational style and best friendship quality was not significant.

V. Discussion

This study has revolved around the concept of identity. One's identity is developed through the interplay of the social and the psychological (Erikson, 1968). In essence, who somebody claims to be is a construction based upon both individual factors and the interpersonal context within which one exists. This construction takes center stage during adolescence. Furthermore, in studying individuals in the middle of the adolescent phase, a process-oriented measurement of the identity formation process is indicated, as the achievement of identity is not assumed to be complete by this point. Berzonsky's (1990) identity processing style addresses this concern. An adaptation of his measure was used for the present study. In addition, mature identity development is often regarded as a predictor of positive relationship outcomes later in life (Montgomery, 2005; Zimmer-Gembeck & Petherick, 2006).

The specific purposes of this study were to both replicate and expand upon prior research examining the contributions of personality and family context variables to the use of various identity processing styles (i.e., Dunkel, Papini, & Berzonsky, 2008). In terms of replication, the present study sought to examine the finding that family environment and personality as measured by the Big Five have *unique* contributions to the prediction of the identity processing styles. To facilitate this aim, a similar analysis strategy to Dunkel et al. was used, wherein groups of predictors are entered as blocks in one order (e.g., personality followed by the addition of family) followed by the reverse order (family followed by personality). The present study extends the Dunkel et al.

findings through the use of a dataset with multiple time points. Unlike cross-sectional data analysis, multiple time points allow for the present findings to be interpreted in terms of antecedents and outcomes. Furthermore, the present study aimed to expand the literature on identity styles via the inclusion of social capital breadth and depth within the interpersonal realms of best friendship, family, and romantic partners. To date, little if any literature has combined these two domains explicitly, though there is literature concerning interpersonal outcomes of the identity styles.

Overarching themes in the findings were that from late childhood through early adulthood, the normative style was consistently associated with closeness in family and romantic relationships and the diffuse-avoidant style with poor relationship quality in general. The findings relating to the informational style were not as consistent. Among the findings related to personality, the normative style was negatively associated with Openness and positively associated with Conscientiousness. The diffuse style was negatively related to Conscientiousness. The informational style was not related to personality. These predictive associations are discussed in greater detail in the following sections.

Predicting Identity Processing Style

There is a body of literature linking personality as measured by the Big Five to the identity styles. The most consistent findings include the positive association between Openness and the informational style, the negative association between Openness and the normative style, and the negative relationship between Conscientiousness and the diffuse style (Dollinger, 1995; Duriez et al., 2004; Moghanloo, 2008). Berzonsky (1999) even named Openness as one of the most important means of distinguishing between the

informational and normative identity styles. The present study served mostly to replicate prior findings in this area, with the unique contribution of a longitudinal data set and the simultaneous control of family environment variables.

In addition to the contributions of personality to identity development, there is also a body of literature linking family environment to identity. One of the most consistent findings is the positive link between cohesive family environments and the informational and normative styles (Adams et al. 2006; Berzonsky et al., 2007; Matheis & Adams, 2004) and a negative relationship between identity diffusion and family closeness (Reis & Youniss, 2004). Autonomy support / restriction has also been studied in relation to identity styles, with more authoritarian parenting associated with the normative style and authoritative parenting linked to the informational style (Berzonsky, 2004b). Family conflict has been an area of inconsistency in the literature (Matheis & Adams, 2004; Missotten, et al. 2011). The degree of change and disruption in the family has not yet been studied in terms of identity development, thus the analyses were exploratory. However, it is likely that a chaotic family environment would be disruptive and discouraging to the process of an individual's identity formation. This disruption may push an adolescent to delay processing any type of identity-relevant information – a characteristic of the diffuse style.

Personality

As personality is itself a filter for experience through which one organizes his or her behavior and responses to stimuli, it is an important consideration in the study of identity formation. While it may be tempting to equate personality with identity, the two can be distinguished. Personality does have an impact on the interpretation of external

events (Duriez, 2004). However, personality characteristics tend to be stable throughout life (Costa & McCrae, 1999; Roberts, Caspi, & Moffitt, 2001). Identity (as opposed to the style with which one forms and processes identity) during adolescence is an inherently unstable construct. After all, the formation of one's identity is the "crisis" that must be dealt with during adolescence (Erikson, 1968). In essence, identity has a prescribed period of instability, whereas personality is generally a stable construct.

Initial analyses at the bivariate level supported many of the consistent findings related to personality from the literature. When multiple predictors were entered simultaneously, the normative style was positively associated with Conscientiousness, negatively associated with Openness, and the diffuse style was negatively related to Conscientiousness. These results remained significant while personality was the only predictor as well as in the presence of the family environment predictors. It is plausible that a degree of Conscientiousness (i.e., being able to organize plans and follow through) is a necessary component of being able to process any kind of identity-relevant information. This notion would explain the findings in prior studies that Conscientiousness is positively related to both the informational *and* the normative styles (Dollinger, 1995, Dunkel et al., 2008). The lack of relationship between Conscientiousness and the informational style in the present study suggests that at age 16, personal structures for processing identity may not yet be formed enough to be able to commit to them completely. Berzonsky (1994) discussed the notion that a normative orientation would predispose individuals to rely on the goals and expectations of significant others and collective groups to maintain a positive self-evaluation. Individuals who are informationally oriented, on the other hand, rely on evaluating their

achievements via personal expectations. It is the underdevelopment of these expectations that may cloud the association between Conscientiousness and the informational style previously reported in the literature.

One finding to note when beginning to consider the regression analyses is the fair to moderate correlation between the normative style and the other two styles. This correlation is not present between the informational and the diffuse styles. Thus, it would appear that those who are using a normative style are more likely to be using the other styles as well. The negative association between Openness and the normative style may point toward a general preference of using a normative style at age 16.

A higher level of Openness would not be necessary with normatively oriented individuals. The only input that normatively oriented individuals would need to be open to would be that of significant others, which at this age range most likely includes parents and a few others. One theoretically consistent bivariate association that did not maintain significance when other predictors were included was the positive association between the diffuse style and Neuroticism. Individuals using this style are often highly concerned with impression management and socially based self-evaluations (Berzonsky, 1994). A personality-based predisposition toward anxiety and worry (i.e., Neuroticism) may be behind this need to manage one's image for others. However, as mid adolescence is a time when impression-management is of paramount importance (Westerberg et al., 2004), it is possible that Neuroticism and subsequent drive toward impression management may not account for the orientation toward a diffuse-avoidant identity style. The social concern of individuals using the diffuse style in young adulthood may not be so unique at age 16. In essence, what may be especially predictive of the diffuse style at

age 16 is a lack of ability to follow through and organize oneself conscientiously. In sum, these findings replicate prior research while adding to them via temporally separating predictor from outcome and including family context as control variables so as to parcel out the potential contribution of family environment to personality.

One theoretically inconsistent finding was the lack of association between Openness and the informational style. In addition, the trend toward positive correlation between the informational style and Conscientiousness disappeared in the presence of other predictors. In a similarly organized study, Dunkel et al. (2008) did report the unique contribution of personality to the use of the informational style. In fact, the Dunkel et al. study showed that for all the identity styles, personality retained its unique contribution even in the presence of predictors related to family environment. Given that much of the research on identity style is conducted on a population of college undergraduates, age could play a factor in this lack of relationship. Since the participants were younger than the participants in most other studies, it is possible that there is a wider range (i.e., more variability in other characteristics) of individuals who prefer to use the informational style at age 16 compared to those who use it at age 22. Individuals who could tolerate an extended primary use of the informational style into early adulthood could be more likely to have a higher level of Openness in their personalities. Furthermore, the participants in the current study may or may not have chosen to attend college. This makes the use of the informational style less necessary. As college is an environment that requires a sort of identity moratorium, the informational style would be more useful in such a context.

Prior studies (e.g., Dollinger, 1995; Dunkel et al., 2008, Duriez, 2004) analyzed personality and identity cross-sectionally or only at the bivariate level. Given that there

are few studies wherein the variables are separated temporally *and* are all considered while controlling for family characteristics, the present findings have helped to more solidly confirm a predictive relationship between personality and identity. Personality traits measured in late childhood have an impact on how one processes identity relevant information during adolescence. This impact is significant even when controlling for the effects of the other identity styles and family context variables.

Family Environment

Prior literature on the role of family environment in identity development has focused mostly on various measures of closeness within the family (Adams et al., 2006; Berzonsky et al., 2007; Matheis & Adams, 2004; Reis & Youniss, 2004). As it does with the relationship between personality and identity, the present study contributes to our understanding of family processes and identity via its design and specific measures. The majority of research on family context and identity is cross-sectional in nature. In addition, the studies often rely on a single informant for all measures. The present study has the advantage of many years of data collection, as well as the inclusion of parental report on family environment variables – a unique contribution to the literature. Two especially relevant studies, upon which much of the present study is built (Dunkel et al., 2008; Soenens, Berzonsky, Dunkel, & Papini 2011), recognize a limitation in the retrospective nature of the information that their participants are required to give. In addition, the present study sought to clarify discordant findings among the literature regarding effects on identity of the levels of autonomy allowed an adolescent as well as the amount of conflict in the home. Given the lack of empirical consideration of identity

and family changes and disruptions, examination of these links was largely exploratory (though specific questions were addressed).

Warmth

The finding that the normative style is predicted by warmth within the family is consistent with an extensive body of literature (Adams et al. 2006; Berzonsky et al., 2007; Matheis & Adams, 2004). It may be that a cohesive family environment provides the closeness that would allow for the introjection of these persons' values for individuals using a normative style. Closeness may also come via a tendency toward open exchange of ideas between family members. If this were the case, closeness might be expected to predict the informational style. No relationship was hypothesized between the diffuse style and family warmth. However, when family variables were entered first in the analyses, there was a trend toward a negative relationship between warmth and the diffuse style. Controlling for personality variables made the relationship between warmth and the diffuse style nonsignificant. This pattern of findings for the diffuse style was similar to that found in the study by Dunkel et al. (2008). The pattern suggests that the negative relationship between family warmth may actually be related to unexamined negative influences that a lack of Conscientiousness has on family relationships.

The unexpected finding of a weak but significant negative relationship between family warmth and the informational style warrants explanation. This finding emerged only when controlling for all other variables and was not significant at the bivariate level. Individuals may react to a difficult family environment by more fully engaging themselves in an exploration of their own identities as an escape route from such environments. Furthermore, the present study used a measure of family warmth based

mostly on the how much enjoyment parents experienced doing activities with their child. When these activities were fewer, the child conceivably would be left to do more exploration on their own. Smits, Soenens, Luyckx, Duriez, Berzonsky, and Goossens (2008) unexpectedly found that a psychologically controlling parenting style (a finding often associated with a negative appraisal of the family environment) was associated with the informational style. This finding may be explained a similar fashion to the present study's finding concerning family warmth. In a sense, the present study provides an analogue to this finding.

Autonomy Granting / Restriction

The normative style was predicted by more autonomy restriction and the informational style by less autonomy restriction. Both of these findings, while theoretically sustainable, contradict earlier studies on parenting and identity styles (Smits, et al., 2008; Soenens et al., 2011). Both cited studies found no relation between how much autonomy an adolescent had (measured by agreement to statements such as “my mother/father allows me to do anything I want”) and the informational style. However, these studies did not include personality in their study, nor did their accounts of parenting come from the parents themselves. Accounting for the variance in each style explained by personality and using parents as informants may make the effects of the family environment more discernible in the present study than in prior studies. Furthermore, the present study also controlled for the variance explained by the use of other identity styles.

The results in this domain support the suggestion of a positive developmental pathway from parental support of autonomy to future adolescent / early adult functioning. Van Petegem et al. (2012) note that autonomous functioning that is not coerced (forced to

be autonomous because of neglect), is associated with positive outcomes in subjective well-being and interpersonal intimacy. In addition, the finding that the normative style positively predicts functioning in two interpersonal domains (rather than 1 from the informational style) suggests that the adolescents in with an informational orientation may have adopted this style because of external pressures. This would even further clarify the negative relationship between the informational style and family warmth. Simply put, parents granting more autonomy to their children at age 13 sacrifice opportunities for demonstrating warmth and force their children to adopt an informational style at age 16. This is understandable in light of studies showing that coerced motives behind identity are not predictive of wellbeing (Smits et al., 2010)

Conflict

Contrary to expectation, there was no relationship between the diffuse style and conflict. This finding does not replicate the findings from Missotten and colleagues (2011) but is in line with the findings from the study by Matheis and Adams (2004). The fact that there are now at least two studies that show no relationship between family conflict and the identity styles suggests a preliminary tipping of the scales in that direction. The Matheis study relied on adolescent report whereas the present studied used parent report. In addition, each study had a different measure of conflict. In essence, there is now evidence mounting that conflict, reported in many ways, may not be strongly related to the process of identity formation, especially when controlling for the influences of other variables. However, it may also be the case that a parent report of the level of conflict in the family is less meaningful to the prediction of identity styles than an adolescent report would be. The parent may report a high level of conflict, but if the

adolescent is unaware of any of this conflict, then the real life effects for the adolescent are probably not as apparent. Moreover, Matheis and Adams did not claim that their findings should be readily generalized into identity styles research. Therefore, further empirical attention to this issue is indicated.

Changes and Disruptions

There has been no empirical attention to the amount of change and disruption in a family environment (i.e., moving, illnesses, structural change) and identity style. Thus, though specific predictions were made, they were tentative in nature. No significant relationship was found between the identity styles and this variable. There are a number of possible explanations for this lack of significant findings. One of the most salient is the lack of variance in the predictor variable. In addition, the present study used a simple measure of the number of potentially disruptive events experienced by the child. A measure of exactly how disruptive these events were to the child might have been more useful. As was the case with family conflicts, the perception of the adolescent may be more useful than the report given by the parent regarding these variables.

It is also possible that the experience of changes and disruptions to family life at age 13 is less meaningful to the construction of identity than these changes might have been at another time in the lifespan. For example, had the child been exposed to a chaotic, unpredictable environment as an infant or very young child, the child's expectations of the world and confidence in his or her personal capacities would most likely have been disrupted, with the latent effect of disrupting identity formation and intimate relationship outcomes (Bowlby, 1990, Pittman et al., 2011). It is also possible that change and disruption in the family environment closer to the point when identity

formation is most prominent might have had a more noticeable influence on the choice of identity processing style.

Predicting Social Capital from Identity Styles

At present, no studies examined domains of social capital (Coleman, 1988) as related to identity style. Understanding the pathways to a strong base of social capital may shed light on the reasons behind the protective power that such quality of relationships has against violence, substance abuse, and other forms of delinquency (Barber & Schluterman, 2008). Prior studies have shown the benefits of a more well-developed identity, such as proactive coping skills and clearer dating goals – which can lead to greater relationship satisfaction (Seaton & Beaumont, 2008; Zimmer-Gembeck & Petherick, 2006). As identity is posited by Erikson to precede the stage in life wherein one develops interpersonal intimacy, it is logical to assume that the combination of these to realms of study would be fruitful.

Breadth

In line with predictions, the diffuse style negatively predicts social capital breadth. Given that individuals who use this style in adolescence tend to partake less in the process that their peers are a part of, they may, in effect, be excluding themselves from a broader social network of peers who are not fearful of this process. This self-exclusion may very well carry on through early adulthood, the point at which social capital was measured. However, though this prediction was confirmed, the relationship between the informational style and social capital breadth was only marginally significant. Given that the use of an informational style implies active seeking of identity-relevant experience (Berzonsky, 2004a), these individuals could be expected to have a

broader social network. Further research may clarify this finding through more extensive description of the social networks (i.e., with what kinds of individuals do information-oriented persons associate themselves?).

Family Depth

All predictions regarding family social capital were confirmed. The informational and normative styles were positively associated with family social capital and the diffuse negatively so. As the literature has shown the diffuse style to be associated with a host of negative outcomes (Adams et al., 2001; Berzonsky et al., 2007; Berzonsky & Ferrari, 2009), it is plausible that these are stressors that take a toll on the quality of relationships that these individuals have with their family and significant others. While the informational and normative styles both predicted family social capital, the explanations may be different. An informational individual may come to value the dialogue with family members as an important aspect of identity formation. Normative individuals may be maintaining positive relationships with their family members out of duty or obligation. Further research examining the continuity of family relationships, given a certain identity style, is indicated.

Romantic Partner Depth

The prediction of a positive relationship between the normative style and romantic social capital were confirmed, as was the negative relationship between the diffuse style and romantic social capital. Normatively oriented individuals rely on their relationships with significant others to process and maintain their identities, thus this relationship is theoretically expected and confirmed. However, the lack of relationship between the informational style and romantic social capital is surprising. Given the

adaptive personal qualities often associated with the informational style above and beyond the normative style (e.g., Beaumont, 2009; Seaton & Beaumont, 2008), one would expect positive romantic relationship outcomes. One possible explanation is that these studies did not control for the contribution of the other identity styles in their regression analyses. However, it is also likely that these qualities (wisdom, proactive coping skills) may not yet be fully developed at age 16, when this sample was taken. There is the possibility that the use of a normative style in early to mid-adolescence may help an adolescent develop the strengths (such as wisdom and better coping skills) necessary to use the informational style in early adulthood. By age 20, the use of the normative style may be less adaptive. This would explain the pattern of findings by prior researchers regarding the early-adulthood advantages of the informational style over the normative style. In sum, it would appear that the orientation toward significant others that comes with the preference of normative identity style at age 16 would appear to account for the most positive outcomes for romantic relationship quality at age 22.

Best Friendship Depth

The pattern of results relating to social capital depth in the friendship domain was only partially predicted by the hypotheses of this study. There was no relationship between the informational style and best friendship quality. Controlling for the other styles may have contributed to this pattern of findings. It is possible that some individuals who may have selected a normative identity style in the context of dominant cultural values. These individuals, then, would have little issue with finding a best friendship that fit those values. Thus, it is possible that controlling for that relationship left little variance to be predicted by the informational style. However, the predicted

negative relationship between the diffuse style and best friendship quality was confirmed. It is possible that the avoidance of processing identity-related information characteristic of this style comes hand in hand with an avoidance of genuine self-disclosure (Berzonsky & Ferrari, 2009; Kerpelman, Pittman, & Adler-Baeder, 2008), which would impede the development of a best friendship. This is theoretically consistent in the same vein as the findings related to negative relationships between the diffuse style and the other domains of social capital.

Conclusions, Limitations, Future Directions

The normative and diffuse processing styles provided the most theoretically consistent pattern of results on both ends of the study. In the prediction from family environment and personality to identity style, an understandable pattern of findings emerged that both confirmed prior research and added to the literature by nature of this study's design. The use of multiple informants along with the long-term, prospective nature of the study provided additional depth to a field that has relied mostly on cross-sectional data analysis. The informational style proved to be the most elusive in both predicting its use and its ability to predict social capital outcomes. However, this is not the first study in which predicting the informational style proved to be more difficult than predicting the other styles. In fact, the study from which much of the present study drew direction reported that their analyses predicted the informational style more poorly than the others (Dunkel et al., 2008).

Additional limitations to the current study include the lack of ability to examine change in identity as related to change in family environment and change in interpersonal relationships. In addition, the project from which the data for the present study were

pulled was designed not to study the antecedents of identity. Rather, it was designed to study predictors of adjustment outcomes. Further study that tracks the use of different identity styles at all three time points would yield important data on the development of identity processing over time. Furthermore, the inclusion of personality assessment at all three time points would allow for the analysis of the stability of personality compared to the stability of using different identity styles. To further examine the impact of a chaotic environment on identity development, a measure of change and disruption that does not restrict reporting to the past year of the child's life would be useful. If participants reported the time at which changes were reported and how stressful the experience was, we could gain an understanding of what kinds of stressful experiences disrupt identity development.

What can be gained from the present study is a greater understanding of the pathways that flow from earlier individual and family characteristics to later social successes or failures. Of particular note are the positive outcomes for early adult social capital of individuals who tended toward higher scores on the normative style. As much of the identity styles literature was validated on college undergraduates, the present study's measurement of identity at age 16 suggests that the use of different styles at different ages may be most adaptive. While some characteristics of the normative style have been judged to be negative, the characteristic of valuing significant others most likely plays a significant part in the creation of social capital. It is possible that the use of informational style at age 16 was accompanied by some unmeasured factors such as a self-focus. This self-focus may have led to a deficit in social capital later in life for some

participants. Hopefully, further research can use a truly longitudinal design to measure how social capital and the use of identity styles change over the lifespan.

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Appendix A

Table 1.

Descriptive statistics (Means, Standard Deviations, Skewness)

	Mean	SD	Skew
<i><u>Identity and Controls</u></i>			
Informational	23.5	3.25	1.56
Normative	20.4	4.10	.975
Diffuse	15.9	4.18	.927
Commitment	22.2	4.32	-.193
Gender ¹	.48	.50	.079
<i><u>Personality</u></i>			
Extroversion	3.65	.601	-.074
Agreeableness	3.71	.485	.116
Conscientiousness	3.59	.590	-.134
Neuroticism	2.68	.680	.125
Openness	3.61	.685	-.352
<i><u>Family Context</u></i>			
Changes/Disruptions	3.66	2.42	.832
Autonomy Restriction	1.92	1.73	1.05
Warmth	4.39	.579	-1.07
Conflict	.713	.712	2.59
<i><u>Social Capital</u></i>			
Breadth	4.52	2.56	.698
Family	3.43	.767	-.443
Romantic	2.81	.459	-.705
Best-Friendship	4.63	.445	-1.54

¹ male=0

Table 2.

Correlations among Identity Style Measures and Controls

	Informational	Normative	Diffuse Commitment	
Informational	1			
Normative	.358***	1		
Diffuse	.057	.205***	1	
Commitment	.277***	.371***	-.332***	1
Gender	.127**	.053	-.140**	-.332***

~ = $p < .10$; * = $p < .05$; ** = $p < .01$; *** = $p < .001$; $N = 468$

Table 3.

Correlations among Identity Style measures, family context, and personality variables.

	Informational	Normative	Diffuse
<i>Family Context</i>			
Changes/Disruptions	.024	-.041	.044
Autonomy Restriction	-.055	.135**	.075
Warmth	-.021	.169**	-.058
Conflict	.022	.031	-.015
<i>Personality</i>			
Extroversion	-.008	-.043	-.036
Agreeableness	.081	.070	-.085~
Conscientiousness	.084~	.124*	-.129**
Neuroticism	.082	.121*	.110*
Openness	-.012	-.129**	-.038

~ = $p < .10$; * = $p < .05$; ** = $p < .01$; *** = $p < .001$; Ns range from 380 to 407

Table 4.

Correlations among Identity Style measures and Social Capital variables.

	Informational	Normative	Diffuse
<u><i>Social Capital</i></u>			
Romantic	.094	.180**	-.095
Best Friend	.092~	.038	-.166**
Parents	.209***	.145**	-.076
Breadth	.043	-.058	-.119*

~ = $p < .10$; * = $p < .05$; ** = $p < .01$; *** = $p < .001$; *N*s range from 251 to 412

Table 5.

Predicting identity style from earlier personality and family environment, controlling for the other identity styles, identity commitment, and gender.

	Informational		Normative		Diffuse-Avoidant	
	β	ΔR^2	β	ΔR^2	β	ΔR^2
Step 1		.186***		.331***		.248***
Gender	.11*		.05		-.15**	
Commitment	.25***		.46***		-.47***	
Informational	n/a		.19***		.13*	
Normative	.23***		n/a		.38***	
Diffuse	.12*		.34***		n/a	
Step 2		.008		.038**		.025*
Extroversion	.04		.02		-.02	
Agreeableness	.06		.01		-.04	
Conscientiousness	.02		.13**		-.13**	
Neuroticism	.04		.09~		.06	
Openness	.02		-.15**		.01	
Step 3		.033**		.043***		.008
Changes/Disruptions	.08		-.07		.06	
Autonomy Restr.	-.14**		.14**		.02	
Warmth	-.12*		.16***		-.07	
Conflict	-.02		.03		-.03	

Note: ~ = $p < .10$; * = $p < .05$; ** = $p < .01$; *** = $p < .001$; $N = 351$

Table 6.

Predicting identity style from earlier family environment and personality, controlling for the other identity styles, identity commitment, and gender.

	Informational		Normative		Diffuse-Avoidant	
	β	ΔR^2	β	ΔR^2	β	ΔR^2
Step 1 - Controls		.186***		.331***		.248***
Step 2		.032**		.055***		.009
Changes/Disruptions	.07		-.07		.05	
Autonomy Restr.	-.14**		.15**		.02	
Warmth	-.10*		.18***		-.08~	
Conflict	-.02		.04		-.02	
Step 3		.009		.025**		.023*
Extroversion	-.01		.06		-.03	
Agreeableness	.08		-.01		-.04	
Conscientiousness	.03		.11*		-.12*	
Neuroticism	.05		.08~		.06	
Openness	.01		-.12**		.01	

Note: ~ = $p < .10$; * = $p < .05$; ** = $p < .01$; *** = $p < .001$; $N = 351$

Table 7.

Predicting identity style from earlier personality and family environment, controlling for the other identity styles, identity commitment, and gender using AMOS.

	Informational	Normative	Diffuse
	β	β	β
Gender	.10*	.02	-.13***
Commitment	.21***	.40***	-.44***
Informational	n/a	.22***	.07*
Normative	.28***	n/a	.35***
Diffuse	.09*	.33***	n/a
Extroversion	-.01	.04	-.02
Agreeableness	.06	.02	-.04
Conscientiousness	.02	.10*	-.10*
Neuroticism	.05	.08*	.05
Openness	.02	-.13**	.03
Changes/Disruptions	.02	-.03	.05
Autonomy Restriction	-.12**	.11**	.05
Warmth	-.09~	.14***	-.06
Conflict	-.01	.03	-.03

Note: ~ = $p < .10$; * = $p < .05$; ** = $p < .01$; *** = $p < .001$; $N = 585$

Table 8.

Predicting social capital from earlier identity style, controlling for the other identity styles, identity commitment, and gender using AMOS.

	Breadth	Family	Romantic	Best-Friendship
	β	β	β	β
Gender	-.02	.08~	.03	.17***
Commitment	-.04	.05	-.03	.03
Informational	.08~	.18***	.03	.06
Normative	-.04	.12*	.20***	.02
Diffuse	-.13**	-.12*	-.14*	-.14**

Note: ~ = $p < .10$; * = $p < .05$; ** = $p < .01$; *** = $p < .001$; $N = 585$

Appendix B
Data Collection Instruments

Identity Processing Style

We'd like to know how much you disagree or agree with the following statements. Please use the following scale to answer the next set of questions.

(1= strongly disagree; 2= somewhat disagree; 3= neither agree nor disagree; 4= somewhat agree; 5= strongly agree)

- ___ 1. You know what you believe about religion.
- ___ 2. You're not sure what you're doing in life.
- ___ 3. You act the way you do because of the values you were brought up with.
- ___ 4. When you talk with someone about a problem, you try to see their point of view.
- ___ 5. You know what you want to do with your future.
- ___ 6. You were brought up to know what to work for.
- ___ 7. You're not sure which values you really hold.
- ___ 8. If you don't worry about your problems they usually work themselves out.
- ___ 9. You're not sure what you want to do in the future.
- ___ 10. You're not thinking about your future now--it's still a long way off.
- ___ 11. You've spent a lot of time talking to people to find a set of beliefs that works for you.
- ___ 12. You've never had any serious doubts about your religious beliefs.
- ___ 13. You have a strong set of beliefs that you use when you make decisions.
- ___ 14. It's better to have a firm set of beliefs than to be open to different ideas.
- ___ 15. When you have to make a decision, you wait as long as you can to see what will happen.
- ___ 16. When you have a problem, you do a lot of thinking to understand it.
- ___ 17. It's better to have one set of values than to consider other value options.
- ___ 18. You try not to think about or deal with problems as long as you can.
- ___ 19. Your problems can be interesting challenges.
- ___ 20. When you make decisions, you take a lot of time to think about your choices.

- ___ 21. You like to deal with things the way your parents said you should.
- ___ 22. When you ignore a potential problem, things usually work out.
- ___ 23. When you have to make a big decision, you like to know as much as you can about it.
- ___ 24. People need to be committed to a set of values to live a full life.

Autonomy Restriction

In most families parents make the decisions about some things, but kids make their own decisions about other things. On other things the parents and kids may discuss the issue and come to some agreement. I'm going to list some topics. Would you please say who makes the decision: Is it

1=parents decide; **2**=parents discuss with kid but have final say;

3=joint decision; or **4**=kid decides

- _____ 1. how late my kid can stay up
- _____ 2. whom my kid can play with
- _____ 3. how late my kid stays out after school
- _____ 4. where my kid goes after school
- _____ 5. what cereal to buy at the store
- _____ 6. what my kid eats for supper
- _____ 7. how my kid spends his/her money/allowance
- _____ 8. what my kid watches on TV
- _____ 9. which movies my kid can see
- _____ 10. what my kid can eat for a snack
- _____ 11. how my kid wears his/her hair
- _____ 12. what clothes my kid can buy

TCID _____ Page 26

Warmth and Acceptance Questions:

_____ 1. How well do you and TC get along?
(**1**=not well at all; **2**=not too well; **3**=okay; **4**=well; **5**=very well)

_____ 2. How enjoyable is it for you to spend time with TC?
(**1**=not at all enjoyable; **2**=not very; **3**=somewhat; **4**=quite; **5**=extremely)

_____ 3. In general, how enjoyable are [activities done with your child] for you?
(**1**=not at all; **2**=slightly; **3**=somewhat; **4**=mostly; **5**=very much)

Changes and Adjustments

1. What kinds of changes and adjustments has your family had in the past year? [*Int.: Free response first--code free mention as 2, then prompt from list--code 0=did not occur, 1= did occur. For each item mentioned, ask "and how was that for you and your family?]* Have parent rate degree of stress and record in the Free or Prompted Mention column: **1**=pleasant change; **2**=a little negative stress; **3**=moderate negative stress; **4**=a lot of negative stress.

Mention (2-1-0)	Stress (1-4)
_____	_____ a. moved
_____	_____ b. major home repairs/remodeling
_____	_____ c. severe/frequent illness for TC
_____	_____ d. accidents/injuries for TC
_____	_____ e. other medical problems for TC
_____	_____ f. medical problems for close family members
_____	_____ g. death of close family member
_____	_____ h. death of other important person
_____	_____ I. divorce/separation for you and spouse/partner
_____	_____ j. parent & TC separated (due to illness, divorce, work, etc.)
_____	_____ k. money problems
_____	_____ l. legal problems
_____	_____ m. problems and conflicts with relatives
_____	_____ n. birth of a baby
_____	_____ o. problems at school for child
_____	_____ p. problems at work for parent
_____	_____ q. loss of a job
_____	_____ r. remarriage or reconciliation
_____	_____ s. extended period (3 months +) parent without job
_____	_____ t. TC changes household
_____	_____ u. other _____

Conflicts:

1. Couple:

All couples have disagreements. Here is a list of kinds of disagreements that TC may have seen or heard between you and your partner in the last year. How frequent have these conflicts been? (*These items are from the CTS, but they are to be interpreted as what transpired between the couple, without regard for which member of the couple did what.*)

(**8**=no partner; **0**=never; **1**=less than once a month; **2**=about once a month; **3**=2-3 times a month; **4**=once a week; **5**=2-3 times a week; **6**=almost every day)

- a. ____ tried to discuss an issue calmly
- b. ____ did discuss an issue calmly
- c. ____ argued heatedly, but didn't yell
- d. ____ yelled, insulted or swore
- e. ____ sulked or refused to talk about it
- f. ____ stomped out of the room or house
- g. ____ threatened to throw something
- h. ____ pushed, grabbed, or shoved
- I. ____ hit

2. Other adults:

During the past year which of the following kinds of conflicts or disagreements has TC seen that took place between other adult family members, ex-spouses, friends, or neighbors?

8=has seen no such conflicts; **0**=never; **1**=less than once a month; **2**=about once a month; **3**=2-3 times a month; **4**=once a week; **5**=2-3 times a week; **6**=almost every day)

- a. ____ tried to discuss an issue calmly
- b. ____ did discuss an issue calmly
- c. ____ argued heatedly, but didn't yell
- d. ____ yelled, insulted or swore
- e. ____ sulked or refused to talk about it
- f. ____ stomped out of the room or house
- g. ____ threatened to throw something
- h. ____ pushed, grabbed, or shoved
- I. ____ hit

Big Five Personality Questionnaire (short CDP version)

The Big-Five personality dimensions are assessed and scored in the BFPQ. The items and their scale name are given below. A formatted version of the questionnaire, complete with response stems, is attached. Scale scores are obtained by taking the mean of non-missing items within each scale. Item reversals are indicated. All scales were empirically and rationally derived.

Extraversion

- 1) Some kids have a lot of energy but other kids find that they really don't have all that much energy. How **energetic** do you think you are?
- 6) How **quiet** do you think you are? (reverse)
- 11) How **talkative** do you think you are?
- 16) How **bold** do you think you are?
- 21) How **shy** do you think you are? (reverse)

Agreeableness

- 2) How **stubborn** do you think you are? (reverse)
- 7) Some kids aren't very patient - they have a hard time waiting for things, but other kids are very patient and don't find it very hard to wait for things. How **patient** do you think you are?
- 12) How **bossy** do you think you are? (reverse)
- 17) How **polite** do you think you are?
- 22) How **selfish** do you think you are? (reverse)

Conscientiousness

- 3) How **organized** do you think you are?
- 8) How **lazy** do you think you are? (reverse)
- 13) Some kids are very responsible, they can be counted on to do what they are told to do, but other kids are not very responsible, they often do not remember what they were told to do. How **responsible** do you think you are?
- 18) How **neat** do you think you are about your things?
- 23) How **forgetful** do you think you are? (reverse)

Neuroticism

- 4) How **nervous** do you think you are?
- 9) How **brave** do you think you are? (reverse)
- 14) How **fearful** do you think you are?
- 19) Some kids worry about things a lot but other kids don't really about things very much. How much of a **worrier** do you think you are?
- 24) How **confident** do you think you are? (reverse)

Openness to Experience

- 5) How **intelligent** do you think you are?
- 10) How **curious** do you think you are?
- 15) How **creative** do you think you are?
- 20) How **artistic** do you think you are?
- 25) Some kids are pretty imaginative, they can think about things in a lot of neat and interesting ways, but other kids aren't so imaginative, they have a little trouble thinking about things in different ways. How **imaginative** do you think you are?

Social Capital Questions

Breadth - Friendship:

About how many different friends could you ask for help or advice if you had a problem and were feeling depressed or confused about what to do? _____ friends

Depth – Best Friendship

Sometimes you have a close friend who does a lot of things with you and is there when you need him/her, and sometimes you don't have a close friend like this.

Please indicate how true the following statements are about you and your best friend. Select your responses from the scale below:

101

1	2	3	4	5
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

_____ 15. Your friend would help you if you needed it.

_____ 16. If you had personal problems, you could tell your friend about it even if it is something you could not tell other people.

_____ 18. You feel happy when you are with your friend.

Depth – Romantic Partner

CDP Assessment of Relationships between Young Adults and their Romantic Partners

A. Dyadic Adjustment Scale

Most persons have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

1. Handling family finances

n/a	0	1	2	3	4	5
	Always disagree	Almost always disagree	Frequently disagree	Occasionally disagree	Almost always agree	Always agree

2. Matters of recreation

0	1	2	3	4	5
Always disagree	Almost always disagree	Frequently disagree	Occasionally disagree	Almost always agree	Always agree

3. Religious matters

0	1	2	3	4	5
Always disagree	Almost always disagree	Frequently disagree	Occasionally disagree	Almost always agree	Always agree

4. Demonstrations of affection

0	1	2	3	4	5
Always disagree	Almost always disagree	Frequently disagree	Occasionally disagree	Almost always agree	Always agree

5. Friends

0	1	2	3	4	5
Always disagree	Almost always disagree	Frequently disagree	Occasionally disagree	Almost always agree	Always agree

6. Sex relations

0	1	2	3	4	5
Always disagree	Almost always disagree	Frequently disagree	Occasionally disagree	Almost always agree	Always agree

7. Conventionality (right, good, or proper conduct)

0	1	2	3	4	5
Always disagree	Almost always disagree	Frequently disagree	Occasionally disagree	Almost always agree	Always agree

8. Philosophy of life

0	1	2	3	4	5
Always disagree	Almost always disagree	Frequently disagree	Occasionally disagree	Almost always agree	Always agree

9. Ways of dealing with parents or in-laws

0	1	2	3	4	5
Always disagree	Almost always disagree	Frequently disagree	Occasionally disagree	Almost always agree	Always agree

10. Aims, goals, and things believed important

0	1	2	3	4	5
Always disagree	Almost always disagree	Frequently disagree	Occasionally disagree	Almost always agree	Always agree

11. Amount of time spent together

0	1	2	3	4	5
Always disagree	Almost always disagree	Frequently disagree	Occasionally disagree	Almost always agree	Always agree

12. Making major decisions

0	1	2	3	4	5
Always disagree	Almost always disagree	Frequently disagree	Occasionally disagree	Almost always agree	Always agree

13. Household tasks

0	1	2	3	4	5
Always disagree	Almost always disagree	Frequently disagree	Occasionally disagree	Almost always agree	Always agree

14. Leisure time interests and activities

0	1	2	3	4	5
Always disagree	Almost always disagree	Frequently disagree	Occasionally disagree	Almost always agree	Always agree

15. Career decisions

0	1	2	3	4	5
Always disagree	Almost always disagree	Frequently disagree	Occasionally disagree	Almost always agree	Always agree

Please tell us how often the following things happen by circling a number.

16. How often do you discuss or have you considered divorce, separation, or terminating your relationship?

0	1	2	3	4	5
All the time	Most of the time	More often than not	Occasionally	Rarely	Never

17. How often do you or your mate leave the house after a fight?

0	1	2	3	4	5
All the time	Most of the time	More often than not	Occasionally	Rarely	Never

18. In general, how often do you think that things between you and your partner are going well?

0	1	2	3	4	5
All the time	Most of the time	More often than not	Occasionally	Rarely	Never

19. Do you confide in your mate?

0	1	2	3	4	5
All the time	Most of the time	More often than not	Occasionally	Rarely	Never

20. Do you ever regret that you married/lived together?

n/a	0	1	2	3	4	5
	All the time	Most of the time	More often than not	Occasionally	Rarely	Never

21. How often do you and your partner quarrel?

0	1	2	3	4	5
All the time	Most of the time	More often than not	Occasionally	Rarely	Never

22. How often do you and your mate “get on each other’s nerves”?

0	1	2	3	4	5
All the time	Most of the time	More often than not	Occasionally	Rarely	Never

23. How often do you kiss your mate?

0	1	2	3	4
Never	Rarely	Occasionally	Almost every day	Every day

24. Do you and your mate engage in outside interests together?

0	1	2	3	4
None of them	Very few of them	Some of them	Most of them	All of them

How often would you say the following events occur between you and your mate?

25. Have a stimulating exchange of ideas

0	1	2	3	4	5
Never	Less than once a month	Once or twice a month	Once or twice a week	Once a day	More often

26. Laugh together

0	1	2	3	4	5
Never	Less than once a month	Once or twice a month	Once or twice a week	Once a day	More often

27. Calmly discuss something

0	1	2	3	4	5
Never	Less than once a month	Once or twice a month	Once or twice a week	Once a day	More often

28. Work together on a project

0	1	2	3	4	5
Never	Less than once a month	Once or twice a month	Once or twice a week	Once a day	More often

There are some things about which couples sometimes agree and sometimes disagree. Indicate if either item below caused differences of opinions or were problems in your relationship during the past few weeks. (Circle yes or no)

29. Being too tired for sex.....YES NO

30. Not showing love.....YES NO

31. The numbers on the following line represent different degrees of happiness in your relationship. The middle point, 3, or "happy," represents the degree of happiness of most relationships. Zero on the scale means "extremely unhappy" and 6 means "perfectly happy."

Please circle the number which best describes the degree of happiness, all things considered, of your relationship. The scale below is used for question #31 only.

0	1	2	3	4	5	6
Extremely unhappy	Fairly unhappy	A little unhappy	Happy	Very happy	Extremely happy	Perfect

Circle the number above that best describes the degree of happiness of your relationship.

32. Please check the line next to the statement which best describes how you feel about the future of your relationship. *Please check ONE statement only.*

- _____ I want desperately for my relationship to succeed, and will go to almost any length to see that it does.
- _____ I want very much for my relationship to succeed, and will do all I can to see that it does.
- _____ I want very much for my relationship to succeed, and will do my fair share to see that it does.
- _____ It would be nice if my relationship succeeded, but I can't do much more than I am doing now to help it succeed.
- _____ It would be nice if it succeeded, but I refuse to do any more than I am doing now to keep the relationship going.
- _____ My relationship can never succeed, and there is no more that I can do to keep the relationship going.

Social Capital Depth - Parents

QUALITY

10. a) Taking things all together, on a scale from 0 to 10, where 0 is really bad and 10 is absolutely perfect, how would you describe your relationship with your mother? _____ with your father? _____

SUPPORT

How often does your mother/father...

MOTHER

FATHER

- | | | |
|-------|-------|--|
| _____ | _____ | a. Talk with you about ordinary daily events in your life? |
| _____ | _____ | b. Try to change how you feel or think about things? |
| _____ | _____ | c. Know about your personal/romantic relationships? |
| _____ | _____ | d. Talk with you about things you are happy or satisfied with? |

- _____ e. Bring up your past mistakes when he/she criticizes you?
 _____ f. Know about your activities at work/school?
 _____ g. Talk with you about problems you may be concerned with?
 _____ h. Try to make decisions for you or tell you how to run your life?
 _____ i. Know when you are sick or have other health problems?

INVOLVEMENT

4. a) How much does your mother take care of your practical needs (e.g., giving you money when you need it, giving you rides places, etc.)?

- | | | | | |
|-------|---------------|-----------|-------|-------------------|
| 1 | 2 | 3 | 4 | 5 |
| Never | Only a little | Sometimes | Often | A lot of the time |

b) How much does your father take care of your practical needs (e.g., giving you money when you need it, giving you rides places, etc.)?

- | | | | | |
|-------|---------------|-----------|-------|-------------------|
| 1 | 2 | 3 | 4 | 5 |
| Never | Only a little | Sometimes | Often | A lot of the time |

5. a) How much does your mother provide for your emotional needs (e.g., respects you, listens to you, cares for you, understands you, etc.)?

- | | | | | |
|-------|---------------|-----------|-------|-------------------|
| 1 | 2 | 3 | 4 | 5 |
| Never | Only a little | Sometimes | Often | A lot of the time |

b) How much does your father provide for your emotional needs (e.g., respects you, listens to you, cares for you, understands you, etc.)?

- | | | | | |
|-------|---------------|-----------|-------|-------------------|
| 1 | 2 | 3 | 4 | 5 |
| Never | Only a little | Sometimes | Often | A lot of the time |

6. a) How much does your mother act as an advisor/mentor (e.g., provide you with guidance and advice on how to handle problems, give you advice about your future goals, career, etc.)?

1	2	3	4	5
Never	Only a little	Sometimes	Often	A lot of the time

b) How much does your father act as an advisor/mentor (e.g., provide you with guidance and advice on how to handle problems, give you advice about your future goals, career, etc.)?

1	2	3	4	5
Never	Only a little	Sometimes	Often	A lot of the time