Identity Integration in Emerging Adulthood: A Longitudinal Investigation of Well-Being and Psychological Outcomes

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Sarah C. Nelson

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Abstract

This study applies the theoretical framework for identity integration presented by Syed and McLean (2016) to a longitudinal and mixed methods investigation of the process and content of contextual identity integration in emerging adults at four time points over the first three years of college (N = 189, M_{age} at wave one = 18.70). A unique application of Little's (2015) Personal Projects Analysis was used to address five weaknesses of past investigations of contextual identity integration by exploring identity integration at the second tier of personality: characteristic adaptations. Results suggested two unique processes: contextual identity integration and contextual identity disintegration. For the majority of participants contextual identity integration decreased across the first three years of college. Concurrent associations suggested complex associations between psychological health, contextual identity integration and disintegration. Taken together with coding of the content of these integrative processes, findings suggest the significance of interpersonal connection to contextual identity integration, as well as the importance of novel approaches to the measurement of identity integration.

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Chapter 1: Background and Literature Review

Identity integration is the core process through which identity develops, a process at the heart of Erikson's (1968) work on identity development (Syed & McLean, 2016). Despite this, identity integration itself has received little attention from researchers, who have largely focused on the outcome of integration: a synthesized and coherent personal identity (Syed & McLean, 2016). Syed and McLean (2016) recently developed a framework by which to understand identity integration, disaggregating the construct into four forms. Of these, contextual integration has received the most previous empirical attention (Syed & McLean, 2016). Contextual integration is the integration of the self across personally meaningful contexts or domains, such as academic, occupational, interpersonal, and intrapersonal (Syed & McLean, 2016).

Previous investigations of contextual integration have failed to capture the person-driven process of integrating meaningful identity domains (Syed & McLean, 2016). Additionally, these investigations have focused exclusively on the process of integrating identity, neglecting to study the content of what is being integrated. Finally, few studies of contextual integration have been longitudinal, missing the chance to observe this developmental process over time. These failures are in large part due to a lack of clear methodology by which to operationalize this construct. The proposed mixed-methods study will investigate contextual integration at McAdams' (1995) second tier of personality, characteristic adaptations. Characteristic adaptations are contextualized goals,

interpretations and strategies that inform how personality traits are enacted (McAdams & Pals, 2006). While this second tier of personality provides a novel mechanism through which to study identity integration, the universe of characteristic adaptations is expansive. Thus, this study longitudinally investigates contextual identity integration using Little's (1983; 2015) Personal Projects Analysis to reduce the universe of possible characteristic adaptations to salient personal projects. Little's (1983, 2015) Personal Projects Analysis (PPA) addresses many of the weaknesses of past investigations of contextual integration. PPA is a person-driven methodology in which participants identify meaningful projects and assess their integration (Little 1983, 2015). Additionally, these individually elicited projects provide important qualitative data on what of identity is being integrated. Finally, this study will investigate personal projects at four waves of data collection across the first three years of college, identifying concurrent and longitudinal associations with measures of well-being and psychological functioning, as well as with traditional measures of identity development. In so doing, this study seeks to expand understanding of the underexplored developmental process of contextual integration in emerging adulthood as well as identifying pathways to optimal psychological functioning.

Identity Integration

Identity development is the process over time of integrating lived experience into a coherent sense of the self, a process occurring within and in collaboration with the sociocultural context of the individual (Erikson, 1968;

McAdams & Zapata-Gietl, 2016). The development of identity begins in adolescence when cognitive abilities and social pressures coalesce in the capacity and desire to define the self (Erikson, 1968; McAdams & McLean, 2013). While this process is likely one that lasts the lifespan, it is in emerging adulthood when deeper exploration of the self begins (Arnett, 2000; Erikson, 1968). It is at this stage, between the ages of 18 and 25, when societal pressures to establish greater autonomy from the family and deeper intimacy with peers create the opportunity for profound exploration of the self (Arnett, 2000).

Identity development in emerging adulthood has traditionally been investigated using one of two models: the identity status model and the narrative identity model. These models, while both grounded in Erikson's (1968) theoretical work, define a healthy identity in slightly different ways. In the status model, a healthy identity is an achieved identity, one that has been committed to after exploration (Marcia, 1966; Schwartz, Zamboanga, Luyckx, Meca, & Ritchie, 2013). In narrative identity theory, a healthy identity is reflected in a coherent interpretive personal life story, one that provides "meaning and purpose across the life course" (Hammack, 2015, p. 23). While identity integration is presumed to be the process through which a healthy identity is developed in both of the identity models, identity integration itself is rarely mentioned or directly investigated (Syed & McLean, 2016). This lack of investigation is at least in part due to Erikson's (1968) theoretical work, which eschews easy operationalization (Syed, 2017a; Syed & McLean, 2016).

In order to empirically study identity integration, it is therefore necessary to establish a theoretical framework that permits empirical investigation. Recent work by Syed and McLean (2016) offered a theoretical framework of identity integration that disaggregates the construct into four investigable forms: contextual integration, temporal integration, person-society integration, and ego integration (Syed & McLean, 2016). This study will explore *contextual identity integration*. The decision to focus on contextual integration is made given the relatively larger body of literature supporting the importance of contextual integration to psychological functioning and well-being (Syed & McLean, 2016).

Contextual identity integration. Contextual identity integration is the integration of identity across context (Syed & McLean, 2016). Having an identity that is contextually integrated indicates that an individual has a consistent sense of self across contexts, an important component of identity development (Erikson, 1968; Syed & McLean, 2016). These contexts are the identity domains that an individual feels are important to who they are. These domains can be either self-selected as important (e.g. interpersonal such as peers, family or intrapersonal such as values, politics) or socioculturally imposed as important (e.g. ethnicity, gender; McLean, Syed, Yoder, & Greenhoot, 2016; Syed & McLean, 2016; Syed, 2017b). While an individual may inhabit many contexts, it is only those domains that they consider important to who they are that must be integrated (Frisén & Wängqvist, 2011; Syed & McLean, 2016; van Hoof and Raaijmakers, 2002). Importantly, ideal contextual integration does not imply that all identity domains

must be similarly meaningful to an individual or that all meaningful domains must be identically integrated. Instead, contextual integration implies that important domains must "fit together or at least not conflict with one another" (Syed & McLean, 2016, p. 111). In the study of contextual integration two approaches are generally used, these approaches are: multiple identities and intersectional identities.

The multiple identity literature addresses contextual integration by exploring the extent to which identity domains are integrated with one another. Studies of multiple identities either code narratives for the presence of domain co-occurrence (McLean et al., 2016) or, more typically, ask participants to report via survey identification and affiliation with two identity domains (Chong & Kuo, 2015; Dehlin, Galliher, Bradshaw, & Crowell, 2015; Skorikov & Vondracek, 1998). This survey data is generally analyzed by identifying correlations amongst identity domains or by using person-centered statistical methods, such as cluster analysis, to identify the frequency of domain configurations within individuals (see Gonzales-Backen et al., 2015; Luyckx, Seiffge-Krenke, Schwartz, Crocetti, & Klimstra, 2014). These different configurations of domains are then used in further analyses to explore associations between configurations and psychological functioning and well-being (Syed & McLean, 2016). This body of research has suggested that individuals with certain configurations of multiple identities and those who report greater emotional acceptance of multiple identities have greater

subjective well-being and lower psychological distress (Chong & Kuo, 2015; Dehlin et al., 2015; van Hoof & Raajmaakers, 2002).

In contrast, the intersectional identities literature addresses contextual integration by directly investigating the extent to which individuals feel identity domains are inter-related (Syed & McLean, 2016). These studies generally use surveys that address the integration of multiple identities such as the Bicultural Identity Integration Measure (Benet-Martínez & Haritatos, 2005) or surveys that ask participants to reflect on the extent to which two identity domains (e.g. lesbian, gay, transsexual identity and person of color identity) intersect (Sarno, Mohr, Jackson, & Fassinger, 2015). The intersectional identities literature suggests that conflict in ethnic identity domains is associated with ethnic or racial discrimination (Sarno et al., 2015), while the ability to integrate two cultural identities is associated with better psychological adjustment (see meta-analysis by Nguyen & Benet-Martinez, 2013) as well as greater domain specific identity development (Walker & Syed, 2013).

Weaknesses of past investigations of contextual identity integration. Taken together, the multiple identities and intersectional identities literature provide preliminary support for the importance of contextual integration to a variety of positive outcomes. However, there are five important weaknesses to these approaches as they relate to the measurement of contextual integration. The first is that the intersectional and multiple identities literatures typically investigate two researcher assigned identity domains. Importantly, contextual

integration is the integration of identity domains that are personally meaningful to the individual (Syed & McLean, 2016). Thus, while these studies establish that two domains are related to one another statistically (multiple identities) or seen as interrelated by the individual (intersectional identities), they do not first identify if these domains are personally important to the participant (Syed & McLean, 2016). Thus, these studies do not truly assess contextual integration, but rather the relatedness, intersection, or statistical co-occurrence of two a priori specified identity domains.

Following from this, the multiple identities literature's use of correlational and cluster analyses is a second important weakness. These types of analyses suggest the co-occurrence of identity domains, but do not establish integration (Syed & McLean, 2016). This is because these statistical procedures only suggest that an individual felt that both domains were similarly important to them (i.e. correlated in their importance) not that these domains were important to one another or connected to one another in some way (Syed & McLean, 2016). In order to truly understand the extent to which an individual's identity is contextually integrated, we must know a) which domains are important to who they are and b) how an individual integrates these multiple domains with one another. This integration within the self and across multiple domains establishes that the individual has a relatively consistent sense of the self across these salient context domains (Syed & McLean, 2016).

A third weakness of past investigations of contextual identity integration consistent with research on identity development research more broadly, is method variance. A great deal of past work on identity finds strong associations between scores on rating scales of identity commitment and scores on rating scales of well-being or psychological health (see Meeus, Iedema, Helsen, & Volleberg, 1999; Schwartz, Donnellan, Ravert, Luyckx, & Zamboanga, 2012). The method variance problem can easily be seen when the items in commonly used identity rating scales such the Erikson Psychosocial Stage Inventory's (EPSI) and Utrecht-Management of Identity Commitments (U-MICS) are examined (Crocetti, Schwartz, Fermani, & Meeus, 2010; Rosenthal, Gurney, & Moore, 1981). For example, the EPSI's identity coherence subscale contains items such as "I've got it all together" and "I like myself and am proud of what I stand for" (Rosenthal et al., 1981) while the U-MICS commitment subscale contains items such as "My education/best friend gives me self-confidence" and "My education/best friend allows me to face the future with optimism" (Crocetti et al., 2010, p. 184). These items show clear overlap with items from common rating scale measures of well-being such as "I am satisfied with my life" and "In most ways my life is close to ideal" from the Satisfaction with Life scale (Diener, Emmons, Larsen, & Griffin, 1985), or for instance, Ryff and Keye's (1995) work on self-acceptance as a measured dimension of well-being. This overlap in method variance results in inflated effect sizes and likely a misrepresentation of

contextual identity integration's unique contribution to well-being and psychological health.

The fifth weakness of past investigations of contextual identity integration is that they focus almost exclusively on the process of contextual identity integration to the neglect of its content (Syed & McLean, 2015). Identity processes are *how* individuals construct their personal identity (McLean et al., 2014). In past studies of contextual integration, this focus on process has resulted in investigations of how multiple identities co-occur or are viewed as intersecting. As noted by Syed and McLean (2015) the study of identity content has typically taken a backseat to the study of identity process. This is likely in part due to the overall focus in the developmental literature on process, as well as the cumbersome nature of the complex study of content (McLean et al., 2016).

Identity content is *what* identity truly is, it is those beliefs, attitudes, goals, roles, behaviors, and experiences that make up the "stuff" of identity (Syed & McLean, 2015). It is this "stuff" across identify context that must be integrated to arrive at a contextually integrated identity. Thus, contextual identity integration is necessarily linked to content and therefore an investigation of contextual identity integration, must explore both process and content (Syed & McLean, 2015). Given the importance of content to contextual integration this study will heed calls by researchers to address this component of identity (Galliher, McLean, & Syed, 2017; Kroger & Marcia, 2011; Syed, 2016). It seems likely that the content

of identity development would reflect normative or typical development at a given developmental stage.

In emerging adulthood, it would therefore be expected that the content of contextual integration will reflect engagement with the Eriksonian (1986) development tasks of identity and intimacy (Arnett, 2016; Syed, 2016). Recent work has suggested that these Eriksonian (1968) life stages are a master narrative of development in the cultural context of the United States (Arnett, 2017). Master narratives are "culturally shared stories that guide thoughts, beliefs, values, and behaviors" and personal identity can either be consistent with or deviate from the master narrative (McLean & Syed, 2015, p. 323). Previous work suggests that deviating from the master narrative requires the development of an explanation of this deviation (McLean & Syed, 2015). This explanation necessitates that the individual work against societal power structures and therefore requires greater psychological effort. Likely due to this, deviating from the master narrative has been found to be linked to lower well-being (Adler & Poulin, 2009; Mansfield, McLean, & Lilgendahl, 2010).

Researchers have suggested that the culturally shared story of development in emerging adulthood may be the development of identity and the growth of intimacy (Arnett, 2017; Syed, 2016). Given that developmental stages are expected to occur at specific ages, emerging adults who are "off-time with regards to [these] culturally expected normative transitions" will likely experience more stress (McLean & Syed, 2015, p. 329). In emerging adulthood, this might be

the later or earlier than normative occurrence of culturally expected tasks such as the growth of autonomy from the family, the development of self-understanding, and the deepening of intimacy with romantic partners and peers (McLean & Syed, 2015). Given that being "off-time" creates more psychological stress, it would be expected that emerging adults whose identity content deviates from normative life stage tasks will also demonstrate lower well-being and psychological functioning.

The fifth weakness of past studies addressing contextual integration is that few have been longitudinal. The study of human development necessitates longitudinal investigation in order to identify patterns of change and stability that make up developmental processes (Jeličić, Phelps, & Lerner, 2009). Addressing contextual integration from a longitudinal perspective will permit investigation of how contextual integration changes or remains stable over the first three years of college. Additionally, longitudinal investigation will permit the identification of normative developmental trajectories of contextual integration in emerging adulthood. Through the identification of normative trajectories, it will also be possible to identify deviations from these normative trajectories, particularly as this pertains to life stage tasks (Arnett, 2017; Erikson, 1950).

The proposed study seeks to address these five weaknesses in the contextual integration literature by longitudinally investigating participant identified personally important projects, participant's own assessment of the integration of these projects, and an exploration of the specific content of these projects. A methodology is therefore needed that is grounded in individual's

personally meaningful concerns and goals, that can be investigated over time and that can be necessarily contextualized. One possibility for this methodology lies in recent developments in personality psychology (Capsi, Roberts, & Shiner, 2005; DeYoung, 2015; McAdams & Pals, 2006; Syed, 2017).

Identity and Characteristic Adaptations

McAdams' (1995) three-tiered theory of personality provides a useful lens through which identity can be viewed (Syed, 2017). While identity is one small part of personality, the three tiers developed by McAdams (1995) and expanded by McAdams and Pals (2006), provide three possible levels for the operationalization of contextual integration. In McAdams' (1995) framework, tier one is composed of personality traits, which are "relatively stable patterns of emotion, motivation, cognition, and behavior" (DeYoung, 2015, p. 36). Importantly, traits are decontextualized and highly generalizable, able to explain a great deal of variation in individuals (Capsi et al., 2005). Often reduced to what is called the Big Five (openness, conscientiousness, extroversion, agreeableness, and neuroticism), traits sit within a larger hierarchical system with the metatraits *stability* and *plasticity* resting at the top (Capsi et al., 2005; DeYoung, 2010). Stability is the shared variance of agreeableness, conscientiousness, and neuroticism and represents the tendency to behaviorally or emotionally regulate or restrain (DeYoung, 2010). Plasticity is the shared variance of extraversion and openness and represents the tendency to explore and engage behaviorally and emotionally (DeYoung, 2010). These higher order metatraits have been found to

have a genetic component, to be relatively consistent across cultures (Jang et al., 2006), and to be reliably associated with the neuromodulators dopamine and serotonin (Hirsh, DeYoung, & Peterson, 2009).

At tier two are characteristic adaptations, the "doing side" of personality or "relatively stable goals, interpretations, and strategies" (DeYoung, 2015, p. 35; Lilgendahl, 2015; McAdams, 1995). These adaptations are the ways in which traits are behaviorally enacted in reaction to context (McAdams & Pals, 2006). At the third tier of personality is the individual life story narrative (McAdams, 1995). An important aspect of the life story narrative is that "culturally anchored meaning" shapes and drives the formation of these stories (McAdams, 1995; McAdams & Pals, 2006, p. 210). A true level three narrative must be an integrated life story narrative, one that allows for meaning to be made and individuals to decide what is included or excluded from the story (McAdams, 1995; Syed, 2017a).

The measurement of contextual identity integration could conceivably take place within any of these tiers (Syed, 2017a). As stated above, the study of contextual integration necessitates a manner of inquiry that is grounded in individual's concerns and goals, that is contextualized and that can be investigated over time. Traits, while easily investigated over time, do not capture the context necessary for the study of contextual integration (DeYoung, 2015; Syed, 2017a). Many identity researchers might suggest investigation at level three, the life story narrative. However, level three is highly idiographic and is therefore difficult to

generalize to other individuals (McAdams, 1995; Syed, 2017a). These narratives are rich in data, but cumbersome in practice, particularly in longitudinal investigations. Thus, I turn to level two, characteristic adaptations.

Characteristic adaptations are the goals, interpretations and strategies that make up identity content and process. As they are the ways in which traits are enacted, characteristic adaptations are necessarily contextualized in time, in society, in role, and in domain (DeYoung, 2010; Lilgendahl, 2015; McAdams & Pals, 2006; Syed, 2017a). Additionally, the definition of characteristic adaptations suggests they are one part of identity content (DeYoung, 2010; Syed & McLean, 2015). They are therefore one possible way to wrangle the vast universe of identity content into an entity that can be empirically investigated (Syed & McLean, 2015). Thus, this second tier of personality is a novel approach to investigating contextual identity integration. This second tier provides access to those contextualized, but specific components of the self that must be integrated in order to arrive at a contextually integrated identity (Syed & McLean, 2016). The identification of this level of personality as the level of investigation does not, however, negate the importance of personality traits.

Much of past work on identity and personality focuses on personality at the level of traits rather than characteristic adaptations (Erikson, 1950; Lilgendahl, 2015; Roberts & Capsi, 2003). Primarily researchers have linked personality traits and identity in terms of how each informs changes in the other. This link was first suggested by Erikson (1950) himself, who proposed that the development of a

coherent identity would lead to more stability in the self over the life course. Roberts and Capsi (2003) proposed that identity achieved individuals are more likely to see the world as identity consistent and to make choices that maintain an identity consistent context thereby maintaining stability of personality.

Recent work by Lilgendahl (2015) suggests that the metatraits, plasticity and stability, may moderate optimal trajectories of identity development. This suggestion is made given findings that extraversion, one indicator of plasticity, is linked to greater identity exploration due to sharing of the self with others and more openness to experiences, particularly exploratory ones (Lilgendahl, 2015; McLean & Pasupathi, 2012). Additionally, past findings on the other indicator of plasticity, openness, suggest that it is linked to greater exploration of identity and less intensity of identity commitment (Tesch & Cameron, 1987). Thus, Lilgendahl (2015) suggests that individuals higher in the metatrait plasticity may be more comfortable engaging with identity processes related to change and exploration than their more stable counterparts. Conversely, for individuals high in the metatrait stability even momentary disintegration of identity may negatively impact well-being and psychological functioning (Lilgendahl, 2015). Due to this, the trajectory of optimal or healthy identity development may look different for individuals high in plasticity from those high in stability. It is therefore expected that associations between healthier psychological functioning and well-being and contextual integration will be stronger for those individuals high in stability, for whom identity disintegration is costlier (Lilgendahl, 2015). Thus, while I focus

my investigation at the second tier of personality, characteristic adaptations, I will also explore how plasticity and stability moderate the relationship between contextual identity integration and well-being and psychological functioning.

Characteristic adaptations and Personal Project Analysis. Given the choice to focus on the second tier of personality, characteristic adaptations, it is important to note that they are vast, often viewed disparagingly as the catchall for anything that is "not a trait" (Syed, 2017a). The question remains of how to operationalize such a vast universe of possible goals, strategies, and interpretations. To do so, I turn to Personal Projects Analysis (Little, 1993). In order to study characteristic adaptations, it is necessary to adopt a methodology that allows access to these adaptations and offers boundaries around the construct. Personal Project Analysis provides these boundaries (PPA; Little, 1983; 2015). Personal projects are "extended sets of personally salient action in context" (Little, 2015, p. 94). In other words, they are important and contextualized actions that extend through time, with a beginning, middle, and end (Little, 2015). Personal projects analysis is therefore designed to capture characteristic adaptations by using a person-driven methodology to address the issue of characteristic adaptations' infinite forms.

There are five stages to PPA: project elicitation, project appraisal, and hierarchy appraisal (Little, 2015). In the *elicitation* stage participants are asked to generate a list of their current projects (Little, 2015). By asking participants to spontaneously generate personal projects, this methodology creates an

ecologically representative list of the individual's characteristic adaptations (Little, 2015). Each project is then *appraised* by the individual both in terms of its importance to the self and its importance to each other nominated project. By allowing participants to nominate and appraise their own characteristic adaptations this methodology puts boundaries on the construct, highlighting what is most important for each participant and addressing one weakness of past contextual integration research (Little, 2015).

Due to the breadth and the flexibility of the data collected, findings using PPA vary widely. Text analysis of projects has found that those phrased as "trying to do" rather than "be" were less successful in their completion (Chambers, 2007). Researchers using PPA have found that life satisfaction is related to involvement with projects that are rated as important, enjoyable and moderately difficult (Palys & Little, 1983). In terms of well-being, the relationship between well-being and the traits openness, conscientiousness, agreeableness, and neuroticism is partially mediated by how likely personal projects are to be successful (Albuquerque, Lima, Matos, Figueiredo, 2012). Additionally, McGregor, McAdams, and Little (2006) found that happiness in undergraduate students was highest in those with social personality traits and congruent social personal projects. These researchers also found associations between social life story themes and social personal projects (McGregor et al., 2006).

In terms of content, in college student samples projects related to changing the self were found to be associated with lower well-being and obtaining therapy,

but projects related to self-expression and identity were found to be related to more openness to experience (Little, 1993; Salmela-Aro, Pennanen, & Nurmi, 2001). Research has also pointed to the importance of type of projects for minorities (see Frost, 2011). Frost (2011) found that heterosexual, lesbian, gay and bisexual (LGB) individuals found personal projects related to intimacy highly meaningful.

Perhaps most pertinent to the present study, work has been done using PPA to investigate *goal conflict.* Goal conflict exists when engagement with a personal project hampers engagement with another (Gray, Ozer, & Rosenthal, 2017). A recent meta-analysis including PPA and other methods found that low goal conflict between valued goals was related to greater well-being and lower psychological distress (Gray et al., 2017). While goal conflict does not directly address contextual identity integration, it is assumed that goal conflict would contribute to lower contextual integration as goals are a characteristic adaptation and a part of identity content (McLean et al., 2016; Syed & McLean, 2015). Given these varied findings from PPA, along with past research on identity, it seems likely that greater concordance or integration of personal projects with one another will be related to higher well-being and better psychological functioning. Importantly, the use of PPA provides a manner in which to measure contextual identity integration that, unlike traditional measures of identity coherence and commitment, does not share method variance with existing measures of well-being.

The PPA (Little, 1983; 2015) methodology provides a means by which to operationalize contextual integration. Conducted longitudinally, PPA also addresses the five weaknesses in past investigations of contextual integration previously identified. First, PPA addresses the need to identify personally meaningful projects to be integrated. It does so by requesting that participants self-generate 15 personal projects and then choose those 10 projects that are most important. This means that only those personally generated and selected projects will be investigated for their integration across context. Second, PPA uses a person-driven process in which individuals establish the integration or impact of all nominated projects on one another. Third, the projects nominated by participants can be explored and examined for their content, in particular as this content relates to life stages tasks. Fourth, PPA can be conducted longitudinally, thereby providing an opportunity to observe the development of contextual integration over time. Thus, PPA offers a methodology that addresses weaknesses of past investigations of contextual integration, while also providing a novel methodology to investigate identity at the second tier of personality.

Identity Integration and Associations with Psychological Health, Well-being and Traditional Measures of Identity

Previous investigations of multiple and intersectional identities have linked contextual identity integration to well-being and lower psychological distress. (Chong & Kuo, 2015; Dehlin et al., 2015; Nguyen & Benet-Martinez, 2013; van Hoof & Raaijmakers, 2002). However, there is little work directly

investigating identity integration (Syed & McLean, 2016). Research on identity development more broadly, consistent with Eriksonian (1968) theory has found associations between identity and well-being and psychological functioning. I review this literature now to further support my hypotheses related to psychological functioning and wellbeing.

In both adolescent and emerging adult samples, identity status researchers have found associations between well-being and identity achievement (meaning engagement with both exploration of and commitment to an identity; see Luyckx, Schwartz, Goossens, Soenens, & Beyers, 2008; Schwartz et al., 2011). Narrative identity researchers have shown that well-being in adolescents and emerging adults is associated with: coherence of the life story narrative, connecting important life events to an understanding of the self, narration of difficult experiences as "transformative", and narration of life stories as tales of personal growth or as redemptive (Baerger & McAdams, 1999; Bauer, McAdams, & Pals, 2006; McLean, Breen, & Fournier, 2010; McLean, Pasupathi & Pals, 2007). Adler, Lodi-Smith, Phillippe, and Houle (2016) identified several narrative themes such as motivation and integrative meaning that have incremental validity as predictors of prospective well-being. Work has also been done examining domains of identity and their association with well-being. For instance, two meta-analyses have demonstrated associations between well-being and ethnic identity, both overall (Smith & Silva, 2011) and the positive aspects of ethnic identity (Rivas-Drake et al., 2014).

In terms of psychological functioning, identity status researchers have found higher rates of anxiety, depression, and other internalizing symptoms and disorders in individuals who are actively exploring their identities (Kidwell, Dunham, Bacho, Pastorino, & Portes, 1995; Porfeli, Lee, Vondareck, & Weingold, 2010; Schwartz et al., 2009). Low internalization however is associated with the achievement (exploration with commitment) and foreclosure (commitment without exploration) identity statuses (Crocetti, Rubini, Luyckx, & Meeus, 2008; Schwartz et al., 2011). In turn, diffusion (little exploration and no commitment) is associated with high levels of internalizing disorders (Kroger & Marcia, 2011). Narrative identity researchers have shown that dissatisfaction with the self and narration of positive events with a negative lens are associated with greater internalizing symptoms (McAdams, 2011; McAdams, Reynolds, Lewis, Patten, & Bowman, 2001). Additionally, narratives that demonstrate personal agency are generally associated with better mental health (Adler, 2012). Taken together the status and narrative approaches to identity development along with work on multiple and intersectional identities suggest that greater concurrent integration of identity and trajectories of increasing contextual integration will be associated with greater psychological health. As noted previously, this study addresses the overlap in traditional methods of measuring identity and well-being and therefore the strength in associations between contextual identity integration and psychological health are likely to be more on par with narrative approaches rather than studies using rating-scales.

As the research on identity and its outcomes is largely rooted in the conceptualization of identity as exploration and commitment or coherence it will be essential to investigate how contextual identity integration operationalized using PPA relates to traditional measures of identity development (Syed & McLean, 2016). Integration across context is a process necessary to the development of a coherent and consistent sense of self (Erikson, 1968; Syed & McLean, 2016). Given the importance of the process over time of contextual integration to identity development, I expect that trajectories of increasing contextual integration over time will be associated with greater identity coherence, exploration and commitment at wave four of data collection (Erikson, 1968; Syed & McLean, 2016). Following this, I expect that measures of identity synthesis and identity commitment will be related at each wave of data collection to concurrent contextual integration.

Present Study

This study seeks to examine the psychological outcomes associated with contextual identity integration through analysis of individual's personal projects at four waves of data collection across the first three years of college. In doing so, I hope to illuminate Erikson's conceptualization and Syed and McLean's (2016) further classification of contextual identity integration, as well as identifying the processes that are most closely related to healthy psychological functioning and well-being. I situate my investigation in the first three years of college, during which identity exploration deepens and broadens (Arnett, 2000). The transition to

college provides exposure to new people, places, and independence prompting individuals to engage in increased work on identity (Arnett, 2000; Azmitia, Syed, & Radmacher, 2013; Syed, 2010). I will investigate how this novel operationalization of contextual identity integration is associated with two traditional survey measures of identity: Erikson Psychosocial Stage Inventory: Identity Subscale (EPSI; Rosenthal et al., 1981) and Utrecht-Management of Identity Commitments (U-MICS; Crocetti et al., 2010).

Hypotheses

My hypotheses were as follows[1]:

1) At each time point, individuals with higher contextual integration and lower contextual disintegration will concurrently demonstrate better psychological health.
2) Individuals in trajectory groups demonstrating increasing contextual integration will demonstrate greater psychological health at wave four.
3) The relationship between trajectory groups of increasing contextual integration and psychological health will be moderated by the personality metatraits plasticity and stability. This moderation will be such that individuals with higher plasticity will demonstrate a weaker relationship between contextual identity integration and psychological functioning and well-being.

[1] Note that wording for these hypotheses has been slightly changed for clarity from pre-registered version. Additionally, the pre-registered decision to create two scales (Disintegration and Integration) was not reflected in the original wording of the hypotheses.

4) Identity coherence and identity commitment using traditional survey measures will be positively correlated with contextual integration measured at each time point. Additionally, identity subscales reflecting commitment (Identity Coherence, Relationship Commitment, Educational Commitment) at wave four will be associated with individuals in trajectory groups of increasing contextual identity integration.
5) Individuals for whom the content of contextual integration matrices reflects engagement with the master developmental narrative of the identity and intimacy life stage tasks will demonstrate greater psychological health at wave 4.

Chapter 2: Research Method

Participants and Procedure

The data for this study were drawn from a longitudinal project conducted at a large university in the Midwestern United States. Data were collected at roughly six-month intervals beginning in the spring of participant's first year of college (M_{age} = 18.70, SD = .72) and ending in the fall of participant's third year of college (about one and one-half years after data collection began). The original sample included 259 participants (71% female). Consistent with our planned research design that targeted retention of 200 participants at W2, at the second wave (W2) of data collection, 196 participants remained in the sample with 76% retention. At the third wave (W3) of data there were 191 participants and at the

fourth (W4) and final wave of data collection 150 participants remained in the sample.

For the purposes of this study, only participants who were present for at least three waves of data collection were included in further analyses. This choice was not pre-registered but was made due to the analysis of qualitative open-ended data that cannot be imputed as well as the desire for a common dataset. This results in a sample size of 189 participants (74% of the original W1 sample). The majority of this sample (54%) participated in all four waves of data collection, with the remaining 46% participating in three waves. Analyses of patterns of missingness in the final dataset can be found in the Results section. The final sample included 189 participants at W1, 185 at W2 (98%), 184 at W3 (99%), and 150 at W4 (82%). At W1 the demographics of this final sample were as follows. Individuals were aged 18 to 25 with a mean age of 18.70 (*SD* .72). In terms of gender, of the 189 participants in the final sample, 76% were female, 23% were male, and 0.5% (*N* = 1) identified as gender non-binary. Ninety percent of the sample reported that they were born in the United States. Of the 10% not born in the United States, individuals reported that they had been living in the country from zero to 19 years with a mean of 8.97 years (*SD* = 7.42). Participants self-identified their race or ethnicity by writing it is an open text box. These responses were then coded by the author, the ethnic-racial makeup of the sample at W1 was: 80% white, 12% Asian or Asian American, 5% mixed race/ethnicity or multiracial, 2% Latino/a, and 1% black or African-American. Socioeconomic

status (SES) was assessed using the Hollingshead (1975) two-factor index of social position that takes into account education and occupation level of participant's parents. This index provided data for 94% of participants (N = 178) due to missing data in the calculations. Data were reverse coded so that higher values indicated higher SES (M = 3.58, SD = .95, range = 1 - 5). Consistent with this average score, the majority of participant's parents held a bachelor's degree or higher (72% of mothers and 72% of fathers), and were employed (80% mothers, 91% fathers) and worked in occupations with prestige at or above that of "small business owners (<$25,000), skilled manual labor, craftsmen, tenant farmer" (74% of fathers, 61% of mothers). It is of note that 22% of participant's fathers held jobs of the highest prestige ("higher executive, large business owner, or major professional").

Recruitment was conducted at the university through an email sent to all students enrolled in a first-year undergraduate experience course in the college of liberal arts as well as participants in the research experience pool of the university. Participants who were interested contacted the study coordinator. For each wave of data collection participants were invited to a lab with eight computer stations. Those who consented to participate took a battery of qualitative and quantitative measures on the computer using *Qualtrics* (2015) software. This battery was extensive, taking one to two hours to complete and included measures not included in the current study. For each subsequent wave of data collection participants were contacted by the study coordinator who set up

their visit to the lab. For their participation, participants were paid $25 at the first wave of data collection, $30 at the second wave, $35 at the third wave of data collection and $40 at the fourth wave.

Measures

All measures below, save demographics, were provided to participants at each wave of collection.

Demographics. A variety of demographic information was collected from all participants including, age, gender identification, year in school, race/ethnicity, country of birth for self and parents, and socioeconomic status information.

Personal Projects Analysis. (PPA; Little, 1983; 2015). PPA was the central methodology of this study and the responses to PPA were be used to create indices of the forms of identity integration as detailed below. Participants were given the PPA at each wave of data collection. There are four stages to PPA: project elicitation, project appraisal, cross-impact appraisal and hierarchy appraisal (Little, 2015). Note that in this study, only data from the project elicitation stage, two questions from the project appraisal stage, and the cross-impact appraisal stage were included in analysis. In the elicitation stage participants are asked to generate a list of their current projects (Little, 2015). These projects were elicited with the prompt:

> *We are interested in studying the kinds of activities and concerns that people have over the course of their lives. We call these personal projects. All of us have a number of personal projects at any given time that we*

think about, plan for, carry out and sometimes (though not always) complete. Some projects may be focused on achievement ("Getting my degree") others on the process ("Enjoying a night out with friends") ; They may be things we choose to do or things we have to do; They may be things we are working towards or things we are trying to avoid. Projects may be related to any aspect of your daily life, university, work, home, leisure and community, among others. Please think of projects in this broad way.

To start, please take 10-15 minutes and type in the following cells as many personal projects and activities you can that you are currently engaged in or considering – remember these need not be formal projects or even important ones – we would prefer you to give us more of the everyday kinds of activities or concerns that characterize your life at present. Please be completely honest in your answer, as they will not be connected to your name. (Little, 2015).

Participants were then asked to choose from these projects the 10 that are most important to understanding them. In this study, the (up to) ten projects generated at each time point were used examine project content. Participants then *categorized* each generated project into a domain. These domains and their descriptors were as follows: academic (school related projects), occupational (job related projects), health/body (health and fitness related projects), interpersonal (projects dealing with others), intrapersonal (projects related to outlook and

attitudes related to the self, such as self-improvement and spirituality), leisure (projects related to recreational activities done alone or with others), and maintenance (i.e. organization and administration project) These domains are similar to identity domains proposed by McLean and colleagues (2014).

In the next stage, *appraisal*, participants appraised their projects in four ways: a) on various dimensions, b) on stage of completion, c) on affect and d) on the tasks needed for completion. Participants first rated each project on the same set of dimensions such as: importance to you, difficulty, visibility, sense of control, sense of responsibility, adequate time to execute, etc. In this study only two items form this stage were used (though all aspects of appraisal were administered), for each project participants responded to the items "How important is this project to you?" and "All of us have things we do that we feel are typical or truly expressive of us. These things can be thought of as our 'trademarks'. How much do you see this project as a trademark of you?"

In the fourth stage, *cross-impact appraisal*, a matrix was presented in which participants respond to what extent each project is impacted by each other project on a scale from -2 (*Most negative impact)* to 2 (*Most positive impact).* A response of 0 on this scale would indicate that the projects do not impact one another. Little (2015) proposed these matrices as a way to assess the presumed systematically interacting nature of personal projects. In this study, this matrix will be used to construct the Contextual Integration Index, please see the results section for the calculation of this index. The fourth stage, *hierarchical appraisal*,

which asks why participants are pursuing each project was administered at each timepoint, but was not used in the present study.

Measures of identity development.

Erikson Psychosocial Stage Inventory: Identity Subscale (EPSI; Rosenthal et al., 1981). The EPSI is a 72-item scale designed to capture an individual's development along the six Eriksonian developmental tensions (Erikson, 1968). For the purposes of this study only the identity subscale was used. This resulted in 12-items such as "I change my opinion of myself a lot" and "I've got it together" ranked on a 5-point Likert-style scale from 1(*Strongly disagree*) to 5 (*Strongly agree).* A bifactor model of this scale, containing two subscales has been supported by past research (Schwartz et al., 2009). These subscales each contain six items and are *identity coherence,* or the extent to which identity is successfully combined and *identity confusion,* or the sense of feeling "mixed up" about the self (Schwartz et al., 2009). In university samples identity coherence (Cronbach's α = .75) and confusion (Cronbach's α = .75) have demonstrated adequate reliability. The overall scale (Rosenthal et al., 1981) and the subscales have also demonstrated convergent validity with other identity measures (see Schwartz et al., 2009). In this study identity coherence (Cronbach's α W1-W4 = .62, .61, .73, .66) and identity confusion (Cronbach's α W1-W4 = .72, .69, .79, .69) demonstrated adequate reliability at all waves.

Utrecht-Management of Identity Commitments (U-MICS; Crocetti et al., 2010). The U-MICS is a 13-item scale that captures three aspects of identity in

two different domains, friendship and education. These aspects are: *identity commitment* or the enacting of enduring identity choices, *in-depth exploration* or actively thinking about commitments that they have enacted, and *reconsideration of commitment* or the consideration of present commitments in the context of alternatives. Participants respond to items such as "My education/best friend gives me certainty in life" (Commitment), "I think a lot about my education/best friend" (In depth exploration), and "I often think it would be better to try to find a different education/best friend" (Reconsideration of commitment) on a 5-point Likert style scale from 1 (*Completely untrue)* to 5 (*Completely true).* This resulted in six U-MICS subscales, three identity subscales of education and for relationships. The U-MICS aspects subscales have demonstrated adequate reliability (Cronbach's α = .69 - .86) in adolescent samples in Italy and the Netherlands (Crocetti et al., 2011) and France (Cronbach's α = .72- .84; Zimmerman, Mahaim, Mantzouranis, Genoud, & Crocetti, 2012). Construct validity has also been preliminary established through associations with surveys related to self-concept clarity, depression, and anxiety (Crocetti et al., 2011). In this study all six subscales demonstrated adequate reliability at all waves, educational identity commitment (Cronbach's α W1-W4 = .92, .92, .89, .91), in-depth exploration Cronbach's α W1-W4 = .76, .80, .83, .79), and reconsideration of commitments (Cronbach's α W1-W4 = .84, .83, .84, .77) and relationship identity commitment (Cronbach's α W1-W4 =.95, .94, .94, .93), in-depth

exploration (Cronbach's α W1-W4 = .77, .79, .77, .94), and reconsideration of commitments (Cronbach's α W1-W4 = .90, .87, .93, .88)

Measures of psychological health.

The Satisfaction with Life Scale (SWLS; Diener et al., 1985). The SWLS is a 5-item scale that evaluates subjective global well-being (Diener et al., 1985). Items such as "In most ways my life is close to my ideal" and "I am satisfied with my life" were responded to on a 7-point Likert-style scale from 1 (*Strongly disagree*) to 7(*Strongly agree*). In university samples this 5-item scale has demonstrated adequate internal reliability (Cronbach's α = .87) as well as two-month test-retest reliability (.82; Diener et al., 1985). The scale has also demonstrated acceptable convergent validity with other measures of subjective well-being (Diener et al., 1985). In this study the SWLS demonstrated adequate reliability at all waves (Cronbach's α W1-W4 = .89, .96, .89, .92)

Positive and Negative Affect Scale (PANAS-X, Watson & Clark, 1994). The PANAS-X is a 57-item scale capturing the extent to which the participant has experienced eleven specific affects in a given timeframe, in this study the past few weeks. These affects are split into three subtypes: negative affect (e.g. fear, hostility, guilt, sadness), positive affect (e.g. joviality, self-assurance, attentiveness), and other affective states (e.g. shyness, fatigue, serenity, surprise). Participants respond to individual affects (e.g. *downhearted* or *sheepish*) on a 5-point Likert type scale from 1 (*Very slightly or not at all)* to 5 (*Extremely).* Reliability has been demonstrated in university samples for the negative

(Cronbach's α = .84 - .87) and positive affect (Cronbach's α = .86 - .90) subscales across various times frames (moment, today, past few days, past few weeks, year; Watson, Clark & Tellegen, 1988). In this study the two PANAS-X scales demonstrated adequate reliability at all waves, general negative affect (Cronbach's α W1-W4 = .82, .85, .84, .85), general positive affect (Cronbach's α W1-W4 = .88, .85, .87, .91).

Personality Inventory for the DSM-5 (PID-5; Krueger, Derringer, Markon, Watson & Skodol, 2012). The PID-5 is a 220-item scale that measures five domains (negative affect, detachment, antagonism, disinhibition, and psychoticism) of personality psychopathology based on the American Psychological Association's Diagnostic and Statistical Manual 5 (DSM-5; APA, 2013). Participants respond to items such as "I don't get as much pleasure out of things as others seem to" (negative affect), "People would describe me as reckless" (disinhibition), and "I often have ideas that are too unusual to explain to anyone" (psychoticism) on a 5-point Likert-style scale from 1 (*Hardly ever true*) to 5(*Almost always true*). The five domains of the PID-5 have demonstrated adequate reliability in United States representative samples (Cronbach's α = .89 - .96). The PID-5 has demonstrated convergent validity with measures of personality disorders as defined by the DSM-IV and variable convergent validity with other more general measures of personality (Crego, Gore, Rojas, & Widiger, 2015; Hopwood, Thomas, Markon, Wright, & Krueger, 2012). In this study the five PID-5 domain scales demonstrated adequate reliability at all waves, Negative

Affect (Cronbach's α W1-W4 = .93, .94, .94, .94) Detachment (Cronbach's α W1-W4 = .92, .91, .93, .92), Antagonism (Cronbach's α W1-W4 = .92, .93, .91, .91), Disinhibition (Cronbach's α W1-W4 = .92, .91, .92, .90) and Psychoticism (Cronbach's α W1-W4 = .86, .96, .96, .96).

Measure of personality traits.

The Big Five Aspects Scale (BFAS; DeYoung, Quilty, & Peterson, 2007). The BFAS is a 100-item scale that measures the traits and aspects of personality. The Big Five traits (openness, conscientiousness, extraversion, agreeableness, and neuroticism) are each measured with one 20-item subscale. Nested within each of these five subscales are two ten-item subscales that measure the dual aspects of each trait (i.e. openness: intellect, and openness; conscientiousness: industriousness, orderliness; agreeableness: compassion, politeness; extraversion: enthusiasm, assertiveness; neuroticism: volatility, withdrawal). The metatrait, *plasticity* is then constructed either as a mean of or from the shared variance of the openness and extraversion subscales and the metatrait *stability* from the mean of or the shared variance of agreeableness, conscientiousness, neuroticism (DeYoung, 2010). Participants respond to items such as "I get angry easily" and "I change my mood a lot" (Volatility) on a 5-point Likert-style scale from 1 (*Strongly Disagree*) to 5 (*Strongly agree*). The BFAS subscales have demonstrated acceptable reliability in community ($M_{\text{Cronbach's }\alpha}$ = .89, $SD_{\text{Cronbach's }\alpha}$ = .03) and university samples ($M_{\text{Cronbach's }\alpha}$ = .81, $SD_{\text{Cronbach's }\alpha}$ = .05), as well as convergent validity with the five subscales of the

Big Five Inventory (DeYoung, Hasher, Djikic, Criger, & Peterson, 2007; John & Srivastava, 1999). In this study the five BFAS aspects scales demonstrated adequate reliability at all waves, Neuroticism (Cronbach's α W1-W4 = .90, .91, .90, .91), Agreeableness (Cronbach's α W1-W4 = .82, .82, .85, .87), Conscientiousness (Cronbach's α W1-W4 = .84, .82, .84, .85), Extraversion (Cronbach's α W1-W4 = .88, .88, .88, .88), Openness/Intellect (Cronbach's α W1-W4 = .83, .83, .82, .93)

Project content coding. Projects were coded using coding categories generated using an inductive process developed by Braun & Clarke (2006). See Appendix B for a complete discussion of the coding manual development strategy used. Project content was compiled in a single table, with all projects provided by each individual on a single page. The author and two undergraduate students met and discussed a subset of these project lists over the course of six months. This discussion centered on the developmental tasks of identity and intimacy, as well as master narratives, and the concepts of autonomy and connectedness (Grotevant & Cooper, 1987). A preliminary coding manual was created detailing patterns emerging in the data. This preliminary manual was then applied to another subset of cases and refined. This coding manual had five content codes, see Appendix B for a complete copy of this manual as well as examples of these cases. All cases were then coded using a case-study method in which each individual received one code that was designed to capture the content of projects across all four waves. It is of note that the developed codes were hierarchical in order to manage multiple

content categories. For instance, *Task Maintenance* was considered a "neutral code" when projects reflecting nothing above and beyond a to-do list. The *Search for Self* and *Intimacy Development* codes were given if an individual had projects related to these codes across at least two waves of data collection. When both *Search for Self* and *Intimacy Development* projects were evident in at least two waves of data collection, the case was coded as *Identity and Intimacy Development.* Finally, *Committed Identity* was above and beyond these codes so that if an individual had a thread that continued across all waves (e.g. becoming a dentist, ballroom dancing) they were given this code. A gold-standard coder method was used with 26% of the cases were trained by a reliability coder (Syed & Nelson, 2015). Reliability was assessed between the author and this coder using Kappa and percent agreement (Syed & Nelson, 2015). The codes and their reliability were as follows:

***Task Maintenance (Kappa* = .85, 96% agreement).** Over all four waves projects reflect a to-do list of tasks that need to be completed. Projects show little to no self-reflection, no exploration, and no growth.

***Committed Identity (Kappa* = .77, 94% agreement).** Projects have one or two goals or threads that are present throughout all waves. Projects reflect commitment to a career or other identity. Projects show little to no self-reflection, person seems content with who they are, though there can be growth or change reflected in projects.

***Search for Self (Kappa* = .77, 92% agreement).** Projects reflect exploration of the self or development of the self. In particular, many of these cases show strivings to be better. These projects generally show self-reflection and some growth across projects. Note that exploration of the self primarily in the context of relationships is *Intimacy Development.*

***Intimacy Development (Kappa* = .86*, Percent Agreement* =94%).** Projects reflect exploration of relationships or development of connections or intimacy. Often these projects will express striving to be better or do better in relationships with others. These projects generally show self-reflection and growth or change across data collection waves.

Identity and Intimacy Development (Kappa* = .85, 96% agreement*). Projects reflect exploration of the self or development of the self *as well as* growth and development of relationships, intimacy and interpersonal connections. These projects generally show self-reflection and growth or change across data collection waves.

Data Analysis Plan

Prior to any analyses this study was pre-registered with the *Open Science Framework* (https://osf.io/576s8/). Throughout the results, I have indicated when analyses were not pre-registered. In terms of analysis, first, I analyzed the data for differences between those participants included and excluded from the final sample using independent sample t-tests and chi-square analyses. Second, I calculated descriptive statistics and correlations as well as gender differences

given the gender imbalance (23% male) in the data between and amongst all variables. Third, I constructed the Contextual Integration Index and the Contextual Disintegration Index. Fourth, I attempted to construct trajectories of the Contextual Integration Index and Contextual Disintegration Index using Group Based Trajectory Modeling (GBTM). GBTM uses Full Information Maximum Likelihood to handle missing data. Fifth, myself, and a team of coders developed a coding manual and obtained reliability in order to code the content of the four waves of ten nominated important projects for each participant. Sixth, I conducted a series of ANOVAS and linear regressions to determine relationships as predicted in my hypotheses. Seventh, I conducted several post-hoc and not pre-registered analyses which are detailed in the results section. A number of sensitivity analyses were conducted in order to make analytical choices throughout the seven steps of data analysis. Final analyses are reported below with other analyses reported in the appendices.

Chapter 3: Results

Preliminary Analyses

The entire original sample (N = 259) was analyzed to determine if differences were present between those included in the final sample and those who were not included due to missing more than one wave of data collection. In terms of demographics, males were more likely than females or individuals identifying as non-binary to have missed more than one wave of data collection (χ^2 (2) = 8.56, p = .01, *Cramer's V* = .18). Additionally, individuals participating

in three or more waves of data collection were on average younger (M = 18.70, SD = .72) than those who did not (M = 19.03, SD = 1.05; t (257) = 2.83, p = .01, *Cohen's d*= .37). All other demographic variables were non-significant.

In terms of identity and well-being outcome variables at all waves, only four subscales were found to be significantly related to participation in three or more waves and therefore inclusion in the final sample. Individuals with lower scores on the W1 U-MICS reconsideration of educational commitments subscale were more likely to have participated in three or more waves (M = 2.12, SD = .80) than those with high scores (M = 2.38, SD = .92; t (257) = 2.19, p = .03 *Cohen's d* = .30). On the W3 PID-5, individuals with lower scores on trait disinhibition (M = 1.64, SD = .56; t (187) = 3.78, p <.001, *Cohen's d* = 1.42) and trait antagonism (M = 1.64, SD = .47; t (187) = 2.40, p = .02, *Cohen's d* = .84) were more likely to have participated in three or more waves of data collection than those with higher trait disinhibition (M = 2.31, SD = .36) or trait antagonism (M = 2.08, SD = .64) scores. Finally, individuals with higher W3 PID-5 trait psychoticism scores (M = 2.08, SD = .58) were more likely to have participated in three or more waves than those with lower scores (M = 1.52, SD = .53; t (187) = 2.85, p = .005, *Cohen's d* = .95).[2] While the effect sizes for these patterns of missingness range from moderate to large, these statistically significant

[2] I initially proposed to construct a composite variable of psychological health from the five PID-5 trait scales, the two PANAS-X affect scales and the SWLS. Upon reflection, and in analyzing the data, it was clear that collapsing these variables together would obscure important findings and would mask the stark differences in these constructs measured by these instruments. Therefore, all psychological health variables were analyzed separately for each analysis for a total of eight scales tapping this construct.

differences were found only in single waves of the 22 constructs included in this study (amounting to 5% of the total constructs measured across all waves).

Descriptive statistics for all identity, psychological health, and personality variables are presented in Table 1. Due to the gender imbalance in the data, (23% male at W1), a series of t-tests were conducted to determine if there were gender differences for the identity, psychological health, and personality variables at each wave of data collection. In terms of gender differences in the identity variables, differences were found such that men reported higher identity coherence than women at W1 (*Cohen's d* = .48). At W3 and W4, women reported higher educational identity commitment than men (*Cohen's ds* = .39 and .52), while at W2 and W3 men reported significantly higher relationship identity reconsideration of commitments than women (*Cohen's ds* = .38 and .44). There were no other statistically significant gender differences found in identity variables, see Table 2 and Table 3 for statistical tests, *Cohen's d* values and means by gender for all identity variables.

Gender difference were also found in psychological health variable such than men reported significantly higher trait disinhibition, psychoticism and antagonism than women at all waves of data collection (*Cohen's ds* = .46 - .80).[3]

[3] Due to this finding, the subscales making up the antagonism, disinhibition, and psychoticism trait scales of the PID-5 were analyzed for gender differences. These analyses revealed that all three subscales of both the antagonism (manipulation, deceitfulness, and grandiosity, *Cohen's d* = .42 - .70) and psychoticism scales (unusual beliefs, eccentricity, and perceptual dysregulation, *Cohen's d* = .42 - .88) demonstrated the same pattern of significant gender differences with men reporting significantly higher values. For the disinhibition trait scale gender differences were only found for the irresponsibility and impulsivity subscales (*Cohen's d* = .38 - .75) and not for the distractibility subscale (*Cohen's d* = .23 - .40).

In terms of personality, women reported significantly higher neuroticism at W2 than men (*Cohen's d* = 36). At W2 and W3 women also reported significantly higher agreeableness than men (*Cohen's ds* = .46 and .45). Finally, at W4, women reported significantly higher conscientiousness than men (*Cohen's d* = .51). There were no other statistically significant gender differences found in psychological health or personality variables, see Table 2 and Table 3 for statistical tests, *Cohen's d* values and means by gender for all variables. As with patterns of missingness, while patterns in the gender differences found in identity and psychological health constructs range from small to moderate in effect size they amount to only 19% of the constructs measured across all waves in this study.

Construction of the Contextual Integration and Contextual Disintegration Indices

Next, in order to construct the Contextual Integration and Contextual Disintegration Indices, a series of decision making steps were followed that had been laid out in pre-registration of analyses. These steps are elaborated on in Appendix A. Upon examining the results of these steps, a final decision was made to construct two indices, the Contextual Integration Index and Contextual Disintegration Index. These indices were constructed by taking either the sum of the positive ratings or the sum of the negative rating from each participant's Cross-Impact Matrix. Recall that the cross-impact matrix twice compares each of a participant's nominated important projects to one another asking that they rank the impact of each project on the other on a scale from -2 (*Most negative impact)*

to 2 (*Most positive impact).* A response of 0 on this scale would indicate that the projects do not impact one another. Note that within the cross-impact portion of Personal Projects Analysis participants are asked both "How does *Project One* impact *Project Two*?" and "How does *Project Two* impact *Project One*?" resulting in a total of 90 possible comparisons. Thus, a Contextual Integration Index was created for each participant by summing all the positive impact ratings in their matrix (resulting in scale from 0 – 180). The Contextual Disintegration Index was created for each participant by taking the absolute value of all the negative impact ratings in their matrix (again, resulting in a scale from 0 – 180). The mean number of projects at each wave as well as the mean of the Contextual Integration and Contextual Disintegration Indices can be seen in Table 4. Table 4 also presents means and standard deviations for the count of number of zero ratings, negative ratings, and positive ratings within the matrices. An analysis of the count of zero ratings and associations with outcomes can be found in Appendix D. Independent t-tests were run to determine if any gender differences existed in number of projects, the Contextual Integration Index, Contextual Disintegration Index, and the count of negative, positive or zero at each wave of data collection. No significant gender differences were found in number of projects or in the Contextual Integration Index or Contextual Disintegration Index, see Table 4 for means and standard deviations by gender. There were however statistically significant gender differences found for counts of negative, positive and zeros within the matrix. These differences were such that at wave

three males had fewer zeros (M = 42.51, SD = 22.02) than females (M = 54.27, SD = 21.58; t (143) = -2.66, p = .01) and at wave four, females (M = 15.40, SD = 16.27) had fewer negative ratings than males (M = 23.65), SD = 22.58; t (148) = 2.31, p = .02).

To address my hypotheses, I next conducted a series of zero-order correlations, ANOVA and regression analyses as follows.

Hypothesis 1: Integration, Disintegration, and Concurrent Psychological Health at Each Wave

To determine if those with higher contextual integration and lower contextual disintegration demonstrated concurrently better psychological health a series of zero-order correlations were calculated. I note that I did not correct for family-wise error across the tests conduct. As this study is exploratory in nature, results will be discussed in terms of overall patterns, keeping in mind the tentative nature of the implications. In terms of contextual integration, results from Pearson's zero order correlations indicated that negative affect was not statistically significantly associated with contextual integration at any wave (*r's* W1-W4 = .11, .04, .00, .11). However, positive affect was positively and statistically significantly associated with contextual integration at W1, W2, and W4, (*r's* W1-W4 = .24, .17, .07, .25). Satisfaction with life was not significantly associated with contextual integration at any wave (*r's* W1-W4 = .04, -.08, .07, .03). In terms of the personality psychopathology only detachment demonstrated a

statistically and negative association with contextual integration at W4 (*r's* W1-W4 = .01, -.09, -.05, -.18).

The remainder of the PID-5 scales disinhibition (*r's* W1-W4 = .15, -.01, -.04, .00), psychoticism (*r's* W1-W4 = .16, .05, .13, .04), antagonism (*r's* W1-W4 = .11, -.05, .12, .05), and negative affect (*r's* W1-W4 = .05, .01, .06, .00) did not show significant associations with concurrent integration at any wave of data collection. See Table 5 – Table 8 for zero-order correlations between psychological health variables and the Contextual Integration and Disintegration Indices.

With regards to contextual disintegration, only one statistically significant associations were found across all waves of data collection such that individuals with greater positive affect at W1 tended to have greater contextual disintegration (*r's* W1-W4 = .18, .11, .08, .00). Negative affect did not statistically significantly associate with contextual disintegration at any wave (*r's* W1-W4 = -.02, .00, .10, -.06). SWLS was not significantly associated with disintegration at any wave (*r's* W1-W4 = .09, .03, .05, -.03). There were no statistically significant concurrent associations found for the personality psychopathology variables at any wave of data collection: detachment (*r's* W1-W4 = -.07, -.08,-.12, -.05) , disinhibition (*r's* W1-W4 = .04, .01, .00, .04), psychoticism (*r's* W1-W4 = -.00, .06, .01, .00), antagonism (*r's* W1-W4 = .11, -.01, .03, .04), and negative affect (*r's* W1-W4 =-.06, -.01, .00, -.03). See Table 5 – Table 8 for zero-order correlations between

psychological health variables and the Contextual Integration and Disintegration Indices.

Thus, the first hypothesis was in part supported, such that greater concurrent contextual identity integration was found to be associated with greater positive affect at three of the four waves of data collection. In contrast to the hypothesis greater negative affect was also found to be associated with greater contextual disintegration, but only at wave one in the spring of participants' first year of college. Finally, while few personality psychopathology variables were found to significantly associate with contextual identity integration and disintegration, lower levels of trait level detachment, were found to be concurrently associated with greater contextual identity integration at wave four.

Hypothesis 2: Integration and Disintegration Over Time and Wave Four Psychological Health

Determining trajectories of contextual integration and contextual disintegration. Group Based Trajectory Modeling was used to examine the Contextual Integration Index and Contextual Disintegration Index variable over time (Frankfurt, Frazier, Syed, & Jung, 2016; Nagin & Odgers, 2010). Group Based Trajectory Modeling (GBTM) analyzes the differences and similarities between individuals by assuming that all individuals in the sample come from the same population, but that there are subgroups of individuals that are similar in their responses on a chosen variable (Frankfurt et al., 2016). GBTM allows distributions to be broken into groups and creates subcategories which can be

further examined (Frankfurt et al., 2016). Additionally, GBTM uses FIML procedures with robust standard errors to handle non-systematic missing data, Nagin & Odgers, 2010; Widaman, 2006). Note that *I* will be used to denote the intercept for each trajectory group while *S* will be used to denote the linear slope.

Trajectories of contextual integration. The first step in GBTM analysis is to conduct a single class model in order to determine that there is enough variability in the intercept and slope to construct group trajectories (Frankfurt et al., 2016). For the Contextual Integration Index, results from the single-class model indicated that the intercept and slope were significantly variable, suggesting a single-class trajectory starting at a moderate level of contextual integration (I = 36.72, *var* = 249.40, p <.001) and growing slowing overtime (S = 3.29, *var* = 26.90, p = .03).

I then ran GBTM analysis for the Contextual Integration Index with two and three four classes with linear and quadratic terms. Model fit was determined using the fit statistics recommendations provided by Nylund, Asparouhov, and Muthén (2007).[4] See Table 9 for all fit statistics. Overall fit statistics

[4] ssBIC is a relative indicator of model fit, with lower numbers indicating better fit of the model (Raftery, 1995). BLRT and LMR are based on the distribution of the log likelihood that indicate if the *k*-1 model should be rejected in favor of the *k* model, (*k* = the number of classes; Nylund et al., 2007). LMR and the BLRT are regarded as improvements to the log likelihood ratio test with a chi-square distribution (Nylund et al., 2007). LMR has an alternative distribution and the BLRT, the best performing test of model fit, uses bootstrapped samples to estimate a distribution for the likelihood ratio test (Nylund et al., 2007). Entropy is a measure of the ability to differentiate groups, with numbers closer to 1.0 indicating perfect classification accuracy (Celeux & Soromenho, 1993). When considering optimal model fit, Jung and Wickrama (2008) recommend that each class contain a minimum of 10% of the sample.

recommended a linear three group solution as the best fit for the data. See Figure 1 for a graph of these trajectories.

The three groups were as follows with trajectory labels derived from mean-levels of both slope and intercept: 1) *Low- Small Decrease* (*n* =142, 75% of the sample) characterized by fairly low contextual integration decreasing slowly through W4 (*I* = 27.91, *p* <.01; *S* = -2.44 *p* < .01), *Moderate-Small Increase* (*n* = 21, 11% of the sample), characterized by moderate contextual integration increasing solely through W4 (*I* = 49.24, *p* <.001; *S* = 5.83, *p* = .01), and finally 3) *High-Moderate Decrease* (*n* = 26, 14% of the sample), characterized by high (in comparison to means) contextual integration that decreases at a moderate rate through W4 (*I* = 74.37, *p* <.01; *S* = -.16.55, *p* < .01). There were no gender differences found in membership to these trajectory groups (χ^2 (2) = 1.51, *p* = .47, *Cramer's V* = .10).

Trajectories of contextual disintegration. For the Contextual Disintegration Index the intercept was significantly variable, starting lower than the Integration Index (*I* = 19.14, *var* = 249.40, *p* <.001) with a nearly flat and non-significant slope (S =.57, *var* = 26.90, *p* = .40). However, this single class model did not converge do to linear dependency among the latent slope variables. Given this, I fit the model with the variability of the slope fixed to zero. Results from the single class model with the slope variability fixed to zero demonstrated acceptable model fit ($\chi^2_{model\ fit}$ (7) = 25.24, *p* < .001, CFI = .80, Root Mean Square Error of Approximation = .12). The single class model again suggested a nearly flat

trajectory of contextual disintegration across the first three years of college, beginning quite low and staying low over time (I = 19.09, *var* = 296.80, p <.001; S = .00, p = .18). Given that further analyses, could have only suggested variation in intercept (and thus wave one concurrent associations), further analyses were not conduct with trajectories of the Contextual Disintegration Index and this construct was examined only as a single-class model. Therefore, only concurrent associations with contextual disintegration are reported, while GBTM analyses continued with the Contextual Integration Index. See Figure 2 of this single-class trajectory solution.

Associations between contextual integration trajectory and psychological health. To determine if Contextual Integration Index trajectory group membership was related to greater psychological health at W4 a series of ANOVAS were calculated. These results suggested significant differences among groups in negative affect (F (2, 147) = 5.45, p = .01). However, all 95% confidence intervals for the trajectory groups were overlapping suggesting no significant differences (see Zho, 2007). Results also suggested differences amongst trajectory groups in positive affect (F (2, 147) = 5.41, p <.001), these differences were such that individuals in the *Low-Small Decrease* group (M = 3.01, SD = .78, 95% CI = 12.87 – 3.16) demonstrated significantly lower positive affect than individuals in the *Moderate-Small Increase* group (M = 3.59, SD = .56, CI = 3.30 – 3.89; *Cohen's d* = .82). Results did not support any other differences among trajectory groups in Satisfaction with Life or the personality

psychopathology variables. See Table 10 for the characteristics of each contextual integration trajectory group at W4. In post-hoc (and not pre-registered) exploration of personality traits, openness/intellect was found to differ by trajectory group membership (F (2, 147) = 3.70, p = .03), however there were no non-overlapping confidence intervals for this variable.

Thus, the hypothesis that individuals with trajectories of increasing contextual integration would have better psychological health at wave four was in part supported, such that individuals in the trajectory group with increasing contextual integration did have significantly higher positive affect at wave four. These results are tempered by the fact that individuals in this group also reported the highest (though not statistically significantly different) negative affect at wave four. Additionally, while analyses suggested three trajectory groups of contextual integration, two of the three trajectory groups are quite small (less than 15% of the sample). Finally, results supported only one trajectory of contextual disintegration, suggesting that for most individuals, contextual identity integration decreases, while contextual disintegration remains relatively stable across the first three years of college.

Hypothesis 3: Moderation by Personality Meta Traits

In order to test moderation by the latent personality meta-traits plasticity and stability a Confirmatory Factor Analysis (CFA) was first explored. The CFA was run with a model in which the latent factor stability was constructed from the shared variance of conscientiousness, emotional stability (the inverse of

neuroticism) and agreeableness and the latent factor plasticity was constructed from the shared variance of extraversion and openness/intellect (DeYoung, 2010). The CFA indicated good model fit for this data ($\chi^2_{model\ fit}$ (4) = 6.10, p = .19, sample-size adjusted Bayesian Information Criteria = 1184.39, CFI = .96, Root Mean Square Error of Approximation = .05). See Table 11 for the standardized estimates and statistical significance of pathways between the latent personality meta-traits and observed personality traits. It is of note that the latent meta-trait plasticity was statistically significantly correlated with the latent meta-trait stability in this model (r = .55, p <.001).

To test moderation by plasticity and stability, a series of grouped structural equation models (SEM) were conducted. For each identity or psychological health construct, a grouped SEM model was conducted with each of the three Contextual Integration trajectory groups (*Low and Increasing Integration, Moderate and Decreasing Integration*, and *Low and Decreasing Integration*) in which the latent plasticity and stability variables predicted all elements of each construct in a single model (e.g. in-depth exploration of relationship identity, commitment to relationship identity, and reconsideration of commitment to relationship identity), see Figure 3 for an example of this model. This SEM model was run two times for each construct, once with all paths of the path model (but not the latent meta-trait paths) unconstrained and once with all path constrained. If the change in chi-square from the unconstrained to the constrained SEM models had been statistically significant for any construct the model would have been further tested

in order to pinpoint which pathways were contributing to this significant change. However, for all constructs, these chi-square tests indicated no significant change in model fit suggesting no moderation by personality meta-trait of the relationship between Contextual Integration Index trajectory group and any personality or psychological health outcomes. See Table 12 for a summary of these chi-square tests for all constructs. In sum, the hypothesis that the relationship between trajectory group membership and contextual identity integration and disintegration would be moderated by meta-trait was not supported.

Hypothesis 4: Concurrent and Overtime Integration and Disintegration and Identity Development

To determine if those with higher contextual integration and those with lower disintegration demonstrated greater identity development a series of zero-order correlation were calculated; see Tables 13 through 16 for these values and statistical significance tests. I note again that family-wise error across these tests was not corrected for and that all conclusions drawn are tentative in nature. In terms of integration, identity confusion was not statistically significantly associated with contextual integration at any wave of data collection (*r's* W1-W4 = -.03, -.04, .06, -.03). Identity coherence was statistically significantly and positively related to contextual integration at W1 and W4 only (*r's* W1-W4 = .18, .08, .09, .27).

With regards to educational identity and contextual integration, educational identity commitment was significantly and positively associated with

contextual integration only at W1 (*r's* W1-W4 =.17, .12, -.01, .09). In-depth exploration of educational identity was significantly and positively associated with contextual integration at W1 and W4 (*r's* W1-W4 =.26, .14, .08, .20), while reconsideration of educational identity commitments was not significantly related to contextual integration at any wave of data collection (*r's* W1-W4 = -.05, .00, -.04, -.06). In terms of relationship identity, relationship identity commitment was significantly and positively correlated with contextual integration only at W1 (*r's* W1-W4 = .19, .00, -.01, .08). Neither in-depth exploration of relationship identity (*r's* W1-W4 = .14, .04, .15, .08) nor reconsideration of relationship identity commitments (*r's* W1-W4 = -.09, .12, -.02, -.13) were statistically significantly correlated with contextual integration at any wave.

With regards to contextual disintegration, identity confusion was not concurrently associated with contextual disintegration at any wave of data collection (*r's* W1-W4 = -.06, -.08, .06, -.09). Identity coherence was also not statistically significantly related to contextual disintegration at any wave (*r's* W1-W4 = .16, .04, .04, .01). In terms of educational identity, commitment to educational identity was statistically significantly and negatively associated with contextual disintegration only at W2 (*r's* W1-W4 = -.05, -.21, -.05, -.15). In-depth exploration of educational identity (*r's* W1-W4 = -.09, -.02, -.02, -.01) was not statistically significantly associated with contextual disintegration at any wave. Reconsideration of educational identity commitments however was statistically significantly and positively associated with contextual disintegration, but only at

W4 (*r's* W1-W4 = -.06, .05, .08, .20). In terms of relationship identity, commitment to relationship identity (*r's* W1-W4 = -.01, .11, -.13, .14). and reconsideration of relationship identity commitments (*r's* W1-W4 = -.14, -.12, .00, .13) were not statistically significantly related to contextual disintegration at any wave. In-depth exploration of relationship identity was positively and statistically significantly associated with contextual disintegration only at W4 (*r's* W1-W4 = .15, .11, .12, .21).

Additionally, characteristics of each Contextual Integration Index trajectory group were explored in relationship to identity variables, see Table 10, with one significant difference founds between trajectory groups in wave four in-depth exploration of educational identity (F (2, 147) = 5.62, p = .004). This differences were such that individuals in the *Low-Small Decrease* group (M = 3.58, SD = .66, 95% CI = 3.46 – 3.70) had statistically significantly lower in-depth exploration of educational identity than individuals in the *Moderate-Small Increase* group (M = 3.94, SD = .42, CI = 3.73 – 4.16; *Cohen's d* = .67 with non-overlapping 95% confidence intervals and the *High-Moderate Decrease* group (M = 4.01, SD = .66, CI = 3.69 – 4.33; *Cohen's d* = .66) with nearly non-overlapping 95% confidence intervals.

Hypotheses related to concurrent associations between traditional measures of identity development and this novel approach to capturing contextual identity integration were in part supported. As hypothesized concurrent identity coherence was positively associated with contextual identity integration though

only at waves one and four of data collection. Additionally, in support of hypotheses, greater contextual integration at wave one was associated with associated with commitment to educational and relationship identity, while contrary to hypotheses it was also associated with greater in-depth exploration of educational identity (waves one and four). While no hypotheses were made about contextual disintegration, finding suggest that it is associated with educational commitment at wave two, reconsideration of educational commitments at wave four and exploration of relationship identity at wave four.

Hypothesis 5: Content Analysis of Master Narratives of Development

Braun and Clarke (2006) thematic coding strategy was used to construct a Coding Manual. Please see Appendix B for a thorough description of this coding strategy as well as the coding manual, and examples of matrices prepped for coding. Case-study coding of all waves of projects present for each participant resulted in 189 codes, the largest proportion of participants (29%) had projects reflecting *Task Maintenance (n* = 55). These matrices contained projects like "Getting an internship", "Be productive earlier", and "Finding a summer internship." This was closely followed by *Intimacy Development* capturing 28% of the sample (*n* = 53). *Intimacy Development* matrices contained projects such as "Keep in touch with my roommates this summer" "Spend time with my siblings when I am home", "Be less defensive and independent in my relationship" within at least two waves of data collection. Individuals with projects reflecting *Search for Self* made up 19% of the sample (*n* = 35), these individuals had projects such

as “Confirm my major/my passions” and “Figure out what I want to do with my life” within at least two waves of data collection. Individuals with matrices reflecting *Identity and Intimacy* made up 18% of the sample (*n* = 33) and had projects reflecting both *Search for Self* and *Intimacy Development* at least two waves. The smallest content category was *Committed Identity* capturing only 7% of the sample (*n* = 13), these individuals had matrices with a consistent thread throughout all waves of data collection for example (from wave one to wave four) “Become a well-established actor”, “Get the role of [role] in [play]”, “Audition for shows” and “Solidify plans and creative concepts for theatrical projects.” These content categories did not differ significantly by gender (χ^2 (8) = 6.50, *p* = .59). Content categories were also examined by race-ethnicity. Due to the small sample size of participants of color this analysis was conducted only at two levels of race-ethnicity, those identifying as white or European American and those identifying as another race-ethnicity. Results suggested that there were no differences in coding category by race-ethnicity (χ^2 (4) = 4.05, *p* = .40).

To address the hypothesis that individuals whose project content reflected engagement with the master narrative of the identity and intimacy life stage tasks would demonstrate greater psychological health at wave four, a series of ANOVA analyses were conducted for each of the wave four psychological health variables, see Table 17 for a summary of these results. These results suggested that detachment, disinhibition, psychoticism and negative affect at wave four all demonstrated significant differences between content coding categories.

Confidence intervals (95%) and *Cohen's d* mean differences were then examined for all pairwise comparisons. It is of note that *Cohen's d* values are quite high for some of these comparisons due to the small size of the coding groups given wave four data collection attrition. In terms of findings for wave four, individuals in the *Search for Self* content category demonstrated the highest trait detachment at wave four with non-overlapping confidence intervals with *Committed Identity* (*Cohen's d* = 2.29), *Identity and Intimacy* (*Cohen's d* = 1.18, and *Intimacy Development* (*Cohen's d* = .74). Individual in the *Committed Identity* content category also demonstrated lower mean detachment than those in the *Intimacy Development* (*Cohen's d* =.88) category with non-overlapping 95% confidence intervals. Note that the *Cohen's d* effect size for these differences is quite large given the nature of these groups, which were quite small, and the nature of the personality psychopathology variables which are, as expected, positively skewed in this non-clinical sample.

In terms of W4 disinhibition, individuals with *Committed Identity* content demonstrated the lowest trait with non-overlapping 95% confidence intervals with individuals in the *Search for Self Cohen's d* = 1.15). In regards to W4 psychoticism, no content coding categories had non-overlapping 95% confidence intervals, though individuals in the *Task Maintenance* category demonstrated lower psychoticism than individuals in *Search for Self* with an overlap in the CI of only .02 (*Cohen's d* = .72). Finally, in terms of W4 negative affect, no content coding categories had non-overlapping 95% confidence intervals, though

individuals in the *Task Maintenance* category demonstrated significantly lower negative affect than those in the *Search for Self* category with an overlap in CI of only .01 (*Cohen's d* = .71). See Table 17 for means, standard deviations and ANOVA tests for all outcome variables.

Post-hoc exploration of associations with wave four identity development. In terms of post-hoc analyses (and not pre-registered) of differences amongst content coding categories in identity variables, I note that sample sizes for these categories were very small, and only wave four identity confusion demonstrated significant differences. In examining the 95% confidence intervals, individuals in the *Committed Identity* (*n* = 13) group had the lowest identity confusion with non-overlapping 95% confidence intervals with both *Task Maintenance* (*n* = 41; *Cohen's d* = .94) and *Search for Self* (*n* = 23; *Cohen's d* = 1.64). See Appendix C for an analysis of content coding category by contextual integration trajectory group.

Post-hoc exploration of participant assigned domain and coding categories. As a validity check for coding categories, post-hoc and not pre-registered ANOVA tests were run to determine if the mean number of participant-assigned project domains across all waves of data collection (i.e. Academic, Occupational, Health/Body, Interpersonal, Intrapersonal, Leisure, and Maintenance) differed by content coding category. In terms of frequency of participant categorized domains across all waves of data collection, that largest proportion of projects were categorized as Academic (23.3%). The next largest

category were Interpersonal projects (16.8%), followed by Health/Body projects (15.2%), Intrapersonal projects (13.8%), Occupational projects (11.3%), and Leisure projects (11.2The smallest content category represented in participant categorized domains were maintenance projects (8.5%).

See Table 18 for means and standard deviations of these domain counts by content code and ANOVA test results. Total counts of academic domain projects (F (4, 184) = 6.03, p <.001), occupational domain projects (F (4, 184) = 6.26, p <.001) interpersonal domain projects *(*F (4, 184) = 8.03, p <.001), and intrapersonal domain projects (F (4, 184) = 10.59, p <.001) differed significantly by content coding category. For academic domain projects these differences were such that individual in the *Task Maintenance* coding category has the highest Academic domain counts with non-overlapping 95% confidence intervals with *Search for Self* (*Cohen's d* = .75), *Identity and Intimacy* (*Cohen's d* = .81) and *Intimacy Development* (*Cohen's d* = .69) content categories. For occupational domain projects, those in the *Committed Identity* coding category had the highest occupational domain counts, with non-overlapping 95% confidence intervals with *Task Maintenance* (*Cohen's d* = 1.22), *Search for Self* (*Cohen's d* = 1.62), *Identity and Intimacy Development* (*Cohen's d* = 1.62), and *Intimacy Development* (*Cohen's d* = 1.28) content categories.

For interpersonal domain projects, those in the *Intimacy Development* coding category had the most interpersonal domain project with non-overlapping 95% with *Task Maintenance* (*Cohen's d* = 1.06) and *Search for Self* (*Cohen's d* =

.79). *Task Maintenance* had the lowest count of interpersonal domain projects with an additional non-overlapping 95% confidence interval with *Identity and Intimacy* (*Cohen's d* = .65).

Finally, for intrapersonal domain projects, those in the *Task Maintenance* coding category had the lowest number of intrapersonal projects with non-overlapping 95% confidence intervals with *Identity Development* (*Cohen's d* = 1.11), *Identity and Intimacy* (*Cohen's d* = 1.25), *and Intimacy Development* (*Cohen's d* = .57). Additionally, *Identity and Intimacy* had higher intrapersonal domain counts than *Intimacy Development* with non-overlapping 95% confidence intervals (*Cohen's d* = .65).

In sum, hypotheses related to the content of projects or characteristic adaptations were supported, with some nuance; in particular results suggest the importance of social connectedness and intimacy to project content. Individuals with *Search for Self* content, projects similar to exploration of self and striving to be a better person, had highest trait detachment (withdrawal, anhedonia, and intimacy avoidance). Those with *Committed Identity* content consistency of behaviors over time had the lowest trait disinhibition (irresponsibility, impulsivity, distractibility) as well as identity confusion. Additionally, examination of participant classified domains suggested that identity work related to academics and to interpersonal relationships were most commonly identified as important by participants. Thus, if we consider committing to an identity and beginning to form intimate connections to be the master narrative of the emerging

adult developmental stage there is some suggestion that disinhibition and detachment are associated with identity domain content in predicted ways.

Chapter 4: Discussion

This study empirically investigates the process and content of the contextual integration of identity, while addressing weaknesses of past investigations of this construct (Syed & McLean, 2016). Findings and their implications will be discussed in detail below, however overall, the findings suggest that contextual integration and disintegration are unique constructs both from one another and from traditional conceptualizations of identity development. It appears that for most individuals contextual identity integration decreases across the first three years of college while contextual identity disintegration remains fairly stable. Interestingly, perhaps due to the new college context and other developmental processes, concurrent contextual identity integration was found to be associated with both positive affect and negative affect, suggesting unexplored and complex interactions between the experience of integrating identity and well-being. Findings also point to the importance of contextual identity integration to interpersonal connection and to identity content related to intimacy. In terms of theoretical and methodological implications, the findings highlight the importance of this specific developmental period to the data collection. As emerging adults begin college they enter a period of disruption in context and opportunities for the exploration of new domains, therefore some disintegration of important domains may be healthy. Additionally, this study demonstrates the viability of exploring

identity integration at the second level of personality, characteristic adaptations using Personal Projects Analysis and clearly points to the importance of further work that explores how individuals make meaning of the integration or disintegration of their important contexts (Little, 2015).

Contextual Integration and Psychological Health

In examining concurrent associations between contextual identity integration and psychological health the hypothesis that greater well-being would be associated with greater contextual identity integration was, at least in part, supported. Indeed, positive affect showed a relatively consistent positive association with contextual identity integration at three of the four waves of data collection. This is in line with my hypothesis and with past work that suggests the importance of an integrated identity to psychosocial health and well-being (Baerger & McAdams, 1999; Bauer et al., 2006; McLean et al., 2010; McLean et al., 2007). However, positive affect was also associated with greater contextual identity *disintegration* at wave one of data collection. When viewed within the pattern of associations between disintegration and positive affect over time it appears as though this association is weakening over the first three years of college. In other words, having a more contextual disintegrated identity is associated less with positive affect over time. This finding, while likely in part due to the small effect sizes across all waves and in contrast to my hypothesis, is supported by previous work with individuals who are activity exploring their identities (Porfeli et al., 2010; Schwartz et al., 2009; Watson & Clark, 1994).

These results support a conceptualization of contextual identity integration as a unique, dynamic, and complex developmental process unique from traditional conceptualizations of identity (Syed & McLean, 2016). It seems possible that the process of integrating across domains involves dual processes of active exploration of domains and the settled commitment to domains and therefore is associated with higher levels of both negative and positive affect particularly at different development periods (Hammack, 2015; Syed & McLean, 2016). The developmental timing of these associations should not be overlooked, at wave one, participants in this study had just begun college, entering a new context with opportunities for exploration of domains and perhaps even the addition of new domains. Perhaps at the beginning of college those individuals who are happier allow for more disintegration during this disruptive process as they adapt to and explore their new environment. Finally, these results suggest an important element of identity processes that this study fails to capture, meaning-making (see McLean, 2005). It is possible that these variations in associations with psychological health relate to *how* it is that individuals make sense of or explain to themselves the ways in which their identity domains integration or disintegrate. This aspect of contextual identity integration remains an important aspect of future study.

With regards to concurrent associations with personality psychopathology, those individuals with higher trait detachment had lower wave four contextual identity integration. This solitary finding for personality psychopathology again

points to the developmental context of the data collection. College is a time during which relationships with peers and romantic partners grow in importance, when individuals have more control of with who they spend their free time, and when many individuals live in a social environment such as student housing (Arnett, 2000; Erikson, 1968). It may be that over the first three years, the university setting highlights the importance of social connectedness and thus the negative consequences of detachment, analogous to introversion and low capacity for well-being, to identity integration (Anderson et al., 2012). As will be detailed below, this finding and others, suggest the importance of intimacy development concurrent with the healthy integration of identity across contexts at this developmental stage.

Contextual Integration Over Time

As can be seen in Figure 2, analyses uncovered three unique trajectories of contextual identity integration over the first two years of college. The largest group (n = 142, 75% of the sample), *Low – Small Decrease*, was a trajectory of integration beginning fairly low in integration in the first year of college and slowing decreasing across the next two years. The next two groups captured smaller numbers of participants, with one *Moderate- Small Increase* (n = 21) reflecting a moderate level of contextual integration in the first year of college with a slow increase across the next two years. Individuals in the final group, *High -Moderate Decrease* (n = 26) had the highest level of contextual identity integration in their first year of college with more sharply decreasing contextual

integration over the next two years. While no hypotheses were made regarding what sorts of trajectories would be uncovered, these findings suggest that for most individuals the first three years of college are marked by a gradual but steady decrease in contextual identity integration. This is congruent with a great deal of past research about the developmental period between 18 and 21 as characterized by deep exploration of identity and roles (Arnett 2000; Erikson, 1968l Syed & McLean, 2016). These findings hint at the link between this exploration, at least within the college-going population, and decreased contextual identity integration. Additionally, these findings suggest the importance of exploring individual differences between those individuals who follow the expected increasing trajectory and those with decreasing trajectories of contextual integration.

It is of note that these three trajectory groups are in contrast to contextual identity disintegration for which analyses did not support group level differences in trajectory. Single class trajectory analysis for contextual identity disintegration suggested a low and stable level of disintegration across the first three years of college. This finding suggests that contextual identity disintegration and integration, like identity coherence and confusion are two distinct constructs and should be considered as such (Schwartz et al., 2009). Additionally, the lack of group differences suggest that identity disintegration may be a more universal experience, though this operationalization of integration as two constructs begs further exploration.

Trajectories and associations with psychological health and identity outcomes. Hypotheses related to trajectories of contextual identity integration and psychological health at wave four were in part supported, as positive affect at wave four was found to be highest in the group with a trajectory of increasing contextual integration overtime. It seems possible that being on a path towards greater contextual integration despite the contextual upheaval of the university setting sets one up for later well-being or that greater well-being protects individuals from the emotional cost of integrating. Given the lack of further findings, I note that the trajectory groups were quite small. I also note that as put forth by Syed and McLean (2016) it is possible that changes in contextual integration are less distressing as individuals may be able to compartmentalize some important identity domains by making sense of their isolation from other important identity domains, unfortunately this meaning making process was not captured in this study.

Additionally, hypotheses regarding trajectory group membership and identity development were not supported. There was one difference found in identity variables such that individuals in the *Low-Small Decrease* group reported lower levels of in-depth exploration of educational identity at wave four than the *Moderate-Small Increase* group. This finding is intuitive on some level, the largest domain category for the projects provided was academic and the participants are in an academic environment. It makes sense that for those individuals for whom integration is increasing, in-depth exploration would be

highest in the third year of college as they begin to make sense of who they are in this academic environment. It is of note, however, that this is the only relationship between these existing measures of identity development and these trajectories

Moderation by personality meta-trait. Findings related to moderation by personality meta-trait were also in contrast to hypotheses suggesting that the relationships between contextual trajectory group membership and psychological health variables were not moderated by the meta-traits plasticity and stability. Lilgendahl (2015) suggested that individuals with more plastic personalities due to their higher extroversion and openness may be better able to withstand the negative affective states associated with identity exploration and therefore demonstrate differing trajectories of development. In the present study, this suggestion and my hypothesis was not supported, this may in part be due to the complex association between affective state and identity integration. However, post-hoc and not pre-registered analysis of wave four personality trait variables did reveal that individuals in the trajectory group with increasing contextual identity integration had higher levels of extraversion than those in the decreasing group. This finding supports, at least in part, the idea that there are some personality differences, in particular related to social connectedness, that impact trajectories of contextual integration (Lilgendahl, 2015). As with earlier reported findings related to detachment it seems that social connectedness, which is presumably easier for extraverted individuals, is associated with an individual's ability to integrate the self. This is in line with work that has found that

extraverted individuals are more likely to co-construct identity with others and suggestions that extraverts are generally more exploratory in nature (DeYoung, 2015; Lilgendahl, 2015; Thorne, Korobov, & Morgan, 2007).

Contextual Integration, Contextual Disintegration, and Identity Development

In examining concurrent associations with contextual identity integration and disintegration with existing measures of identity, my findings indicated that, in line with my hypotheses, identity coherence was concurrently and positively associated with contextual integration, though only at waves one and four. The significant associations at only wave one and wave four is in line with the conceptualization of contextual identity integration as a dynamic and complex process through which identity coherence is developed (Baerger & McAdams, 1999; Syed & McLean, 2016).

In terms of concurrent associations with domain specific aspects of identity, at wave one greater contextual identity integration was associated with greater commitment to and exploration of educational identity, at wave two greater contextual identity *disintegration* was associated with less commitment to education identity, and at wave four greater contextual integration was associated with greater exploration and greater contextual disintegration with more reconsideration of commitments to educational identity. Thus, it seems that at different times during these first three years of college, individuals with contextually integrated identities are engaging with different processes of educational identity development. The statistically significant associations do

make a great deal of sense when we consider that the primary context of our participants in an academic one, that presumably encourages exploration of this aspect of identity. Additionally, they add to a body of longitudinal findings that suggest the dynamic and developmentally situated nature of educational and vocational identity (see Negru-Subtirica, Pop, & Crocetti, 2015; Pop, Negru-Subtirica, Crocetti, Opre, & Meeus, 2016). It seems that this sense of continuity across domains may associate both with commitment to and exploration of important domains of the self. It could also be that individuals with greater activity in educational identity domain identity processes, perhaps due to some third variable, such as academic achievement or ability, are more likely to find integration in an academic environment. This idea has support from recent work by Pop and colleagues (2016) study who found that adolescents with high academic achievement were more likely to have coherent identities within the academic domain.

With regards to relationship domain of identity, commitment to relationship identity was associated with greater contextual integration at wave one and more reconsideration of commitments to and in-depth exploration of relationship identity was associated with greater contextual disintegration at wave four. Longitudinal work by Meeus and colleagues (1999), found that identity development in the relational domain is particularly unstable, with commitments being made without exploration and then revoke. Additionally, these findings are particularly interesting when considered in concert with the educational identity

findings, contextual identity integration when measured in this way, appears to be more associated with commitment to education identity while contextual identity disintegration is more associated with exploration of relationship identity. educational exploration while contextual identity disintegration was consistently related to relationship exploration. This is an important finding as it supports the uniqueness of contextual integration and disintegration processes as well as the importance of identity domains and developmental context to these processes (Syed & McLean, 2016). It may be that it is at this developmental stage exploration of the next developmental task, intimacy, contributes to disintegration of the self as new valued domains of identity, such as intimate partners, are added to individual's matrices (Erikson, 1968).

The Content of Contextual Integration

The exploration of the content of projects across all four waves of data collection for each individual suggested five themes: *Task Maintenance, Intimacy Development, Search for Self, Identity and Intimacy,* and *Committed Identity.* In line with and driven by these hypotheses many of these content codes reflect engagement with the developmental master narrative of identity and intimacy development. In particular, *Search for Self, Identity and Intimacy* and *Intimacy Development* reflect growth, change, or striving to be better in areas of the self, identity, and relationships. These categories, were driven by theory so are not surprising, and are supported by the participant applied domain categories which reflected high levels of academic and interpersonal projects. It is of note that the

extent to which matrices reflected the importance of engagement with the developmental master narrative of intimacy development for college students was quite clear in this exploration of content (Arnett, 2017).

Importantly, the largest content codes representing over half of the sample were *Task Maintenance* and *Intimacy Development. Task Maintenance* projects tended to be related to academics and school work and were akin to "to do lists" while *Intimacy Development* focused on forming, maintaining, and improving family, friend, and romantic relationships. Additionally, while I disaggregated matrices with projects related to the self into three coding categories: *Search for Self, Identity and Intimacy* and *Committed Identity*, 44% of individuals matrices related to identity. It seems of particular importance however that 46% of individuals in these self-identified important domains focused on the development of connection. This finding supports the previous suggestion given the body of findings in this study that at this developmental stage connectedness to others is not only a developmental task but also one of the ways in which integration may be reached.

I hypothesized that individuals whose integration matrices reflected the master narrative of identity and intimacy development would demonstrate greater psychological health (Arnett, 2017). While the pattern of significance does not fully support this assertion, the pattern of results is intriguing. The results suggest that for those individuals with content reflecting either a *Committed Identity* or *Intimacy Development* psychological health is indeed higher. It is those

individuals whose integration matrices have content related to the *Search for Self* that show a consistent pattern of lower psychological health, consistent with survey-based studies of exploration (Kidwell et al., 1995; Porfeli et al., 2010; Schwartz et al., 2009). In some ways this can be seen as a support for my hypothesis, it is those individuals who are fulfilling the Eriksonian master narrative of emerging adulthood, in committing to important identities and in developing intimate connection that are psychologically healthiest (Arnett, 2017; McLean & Syed, 2016).

However, my hypotheses suggested that content related to self-development would also be related to greater psychological health. In examination of the content of these matrices, a great deal of the projects related to the self, within both the categories *Search for Self* and *Intimacy and Identity* content reflected strivings to *improve* the self. When viewed from this perspective, this finding is in line with research on master narratives as well as research on identity exploration, as both individuals who are "off-time" from the master narrative and those who are actively exploring the self are expected to have lower well-being (Kidwell et al., 1995; McLean & Syed, 2016; Porfeli et al., 2010; Schwartz et al., 2009). This is supported by group differences in personal identity development variables such that individuals in the *Committed Identity* content group had the lowest identity confusion and the highest identity coherence while individuals in the *Search for Self* content category had the highest identity confusion and lowest coherence. Thus, while the coding categories are supported by the traditional measure of

identity development, they also provide a more nuanced understanding of these processes. In fact, this examination of content suggests important variations in the *type* of exploration of the self that is being undertaken. It may be that it is precisely this striving to be a better version of oneself that is particularly painful sort of exploration that could not be identified in traditional survey measures.

Theoretical Implications

In terms of theoretical implications, this study importantly suggests that contextual integration (and disintegration) are unique constructs related to, but not identical to traditional conceptualizations of identity development. In using a mixed method, longitudinal design incorporating Little's (1995) Personal Projects Analysis, this study addresses five important weaknesses in past research on contextual identity integration (Syed & McLean, 2016). First, this study used contextual domains identified as important by participants, rather than researcher assigned domains. Second, this study asked participants to quantitatively report integration and disintegration amongst these domains rather than using methods to statistically define integration. Third, this study explored both the content or the *what* is being integrated within these contextual integration matrices as well as examining the process of integration. Finally, fourth, in order to provide a developmental perspective on contextual identity integration, this study looked at integration process and content at four time points over the first three years of college.

In addressing these five weakness, this study offers a response to Syed and McLean's (2016) call to address Erikson's (1968) original conceptualization of identity development as emerging from the process of identity integration. In doing so, this study adds to the existing theoretical understanding of both the process and content of contextual identity integration as well as identity development theories more generally. In investigating this framework empirically this study importantly suggests that contextual identity integration may be made up of dual processes: contextual integration and contextual disintegration. The unique trajectories and relationships of these constructs to outcomes suggest that they may be more than two halves of the same coin. It will be important for future studies to explore both the ways in which domains facilitate and impede one another.

This study further suggests that contextual identity integration and disintegration are unique constructs with complex and dynamic relationships to psychological health over time. In using PPA to measure identity integration this study removes method variance issues associated with traditional measures of identity development and the results suggest less clear associations between integration and well-being than previously found in studies using rating-scale measures. Taken together with the findings regarding domain content this study suggests, perhaps not surprisingly, that identity integration processes are far more complex than many rating scales may have the ability to capture. Theoretically, in using such an approach this study points to the importance of future examination

of the *way* in which individuals are exploring (e.g. searching, striving, exploring) as well as the context of that exploration (i.e. in the presence of close interpersonal connection and attachment).

Finally, this study points to important developmental changes in contextual identity integration overtime, and perhaps even the benefit of being contextually disintegrated in the presence of contextual disruption (like the start of college). It remains to be seen how the other forms of identity integration (i.e. temporal, ego, and person-society) interact with contextual identity integration as conceptualized at the second tier of personality, characteristic adaptations, but this too remains an important theoretical implication of the findings of this study as associated with developmental-timing.

Methodological Issues

This study uses a novel application of an existing measure, Personal Projects Analysis (PPA) which assesses the second level of personality, characteristic adaptions to an analysis of contextual identity integration (Little, 2015). In operationalizing contextual identity integration as the integration of projects in the PPA matrix over time, this study supports the viability specifically of PPA in analyses of identity integration and more generally to characteristic adaptations to explorations of identity integration. The examination of the content of characteristic adaptations supported the possibility of using PPA both for process and content analysis, the importance of exploring both realms of identity simultaneously. Finally, this use of novel measurements of identity integration

allows this study to avoid problems associated with shared method variance. While the use of PPA to capture contextual identity integration as the second tier of personality likely resulted in smaller effects than previous studies, it also highlighted the importance of these findings due to the lack of method overlap.

Practical Implications

In terms of practical implications, this study points to the importance of social connection and intimacy as facilitators of identity integration. This finding is, to my knowledge new, though not terribly surprising given that intimacy development is considered a major task of late emerging adulthood (Erikson, 1968). However, the practical implications of this finding suggest the importance of creating spaces that facilitate connection on college campuses for individuals related to identity. This is similar to findings by Syed (2010) regarding the ethnic domain of identity. The process of integrating the self suggests that college campuses as well as clinicians on college campus would do well to create safe spaces for identity exploration with peers.

This study also supports the complex nature of associations between identity integration, disintegration and psychological health. As emerging adults work towards an integrated understanding of the self, clinicians should be aware of the complex and dynamic nature of contextual integration and its association with psychological health. In particular, it appears that content related to self-improvement is particularly related to poor psychological health. It may be wise

for individuals working with emerging adults to be attuned to the sorts of goals that reflect strivings to be better than one is.

Finally, this study supports the importance of a contextualized developmental approach to clinical work with emerging adults. The beginning of college is a time of great contextual disruption for most individuals and as such it may be, as found in this study, that some level of identity disintegration is psychologically healthy. It is therefore the counseling psychologist's job to support emerging adults through this disintegrative period so that they may find integration across contexts and hopefully eventually identity coherence and commitment

Limitations, Future Directions, and Conclusions

There are several important limitations to the study, first, the data are correlational in nature and thus no directionality, save that inferred from timing of administration of measures, can be determined. The sequentially or concurrence of the identity processes explored in this study remains an important area of further exploration. Additionally, as evidenced by the findings from the educational and relationship domains of identity this could be influenced by domain as well as individual differences. Furthermore, this study is exploratory in nature and family-wise error is a concern, while patterns of results were discussed whenever possible, this remains an important limitation and a motivation for further research. Another important limitation of this study is that participants self-selected for participation in a longitudinal study over three school years, it is quite possible there is bias in our selection process and that we fail to capture

particular individuals who would be less likely to participate in such a study. Additionally, the participants for this study largely identified as European-American or white and were drawn from an urban university in the Midwest. It is likely that cultural and contextual factors influenced some of these findings, suggesting the importance of further applications of this methodology in other context to support the generalizability of the work.

Finally, a central limitation of this study and an important area of further study is the lack of assessment of the meaning participants make of their contextual integration or lack thereof. While many of the inferences made from quantitative and qualitative data regarding project importance and integration have been supported in this study, the fact remains that due to the study design participants do not provide an interpretation of their project content, integration, or disintegration. Given the importance of the way in which individuals conceptualize integration of the self to narrative understandings of identity development, this is an important area of further study (see McLean, 2015). I also think this lack of measurement of meaning making is likely a large part of why the findings from this study are so complex, my guess is that an understanding of how participants see their own contextual integration and disintegration would shed a great deal of light on the findings from this study. An important next step in the exploration of contextual integration and disintegration, particularly within a Personal Projects Analysis framework if the analysis of the meaning individuals made of these matrices in relation to their identities.

In conclusion, this study supports the viability of using Personal Projects Analysis to investigate identity integration from both a quantitative process and qualitative content perspective. Additionally, findings support the conceptualization of contextual identity integration as a related but unique developmental process to traditional conceptualizations of identity such as identity coherence, commitment, and exploration. While findings regarding contextual identity integration's relationship to psychological health were complex, they reveal both the emotional cost and benefit of integrating the self. Finally, through the use of content analysis, this study was able to shine light on not only the process of integration but also on the *what* that is being integrated during the first three years of college. Many of the findings support the importance of social connection and intimacy development to the process of integrating the self. It is my hope that this work serves as a jumping off point from which more investigators can empirically explore identity integration using the theoretical suggestions put forth by Syed and McLean (2016). This investigation makes clear that empirical investigation in order to deepen Erikson's original theory can expand and deepen our understanding of traditional conceptualizations of identity development. Additionally, this study supports the importance of novel approaches and mixed methodologies examining both process and content in the study of newly operationalized constructs as we seek to further the study of identity.

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Chapter 6: Appendices

Appendix A

Construction of the Contextual Integration and Contextual Disintegration indices.

As proposed in the pre-registered version of this study the following steps were followed in order to determine the best of one of six ways of constructing the Contextual Integration Index and the Contextual Disintegration Index. These pre-registered steps were as follows:

Step 1: Selection of important projects. The composite importance variable was constructed by averaging the following two items for each project:

- "How important is this project to you?"
- "All of us have things we do that we feel are typical or truly expressive of us. These things can be thought of as our 'trademarks'. How much do you see this project as a trademark of you?"

In order to define project importance, I selected from three options:

- Option 1a: Identifying all projects that are rated 4 or greater on the composite importance variable.
- Option 1b: Identifying only those projects in the upper quartile of the distribution as important.
- Option 1c: Identifying all ten projects that the individual culled from the original 15 projects as important.

To choose between these three options, I proposed to first look at the distribution of the ratings. If there were few composite importance variables

above four, I proposed that I would use Option 1b. As the composite importance variable was normally distributed at all waves of data collection, I determined that I would use Option 1a or 1c. See Table 19 for a summary of the important project analysis at each wave of data collection. Having made this determination, I moved to step 2 where I executed all Options at Step 2 twice, once for Option 1a and once for Option 1a. If Option 1a and Option 1c were similar at Step 2 in their association to existing identity measures I determined that I would use Option 1a as it allows the largest amount of quantitative and qualitative data to remain in the study, see Table 20.

Step 2: Construct of the Contextual Integration Index. In this next step, I proposed that I would choose between one of the following three options.

- Option 2a: Average all ratings of integration, then covary all analyses with total number of projects that are important in analyses.
- Option 2b: Split the integration scale into an integration (positive) and disintegration scale (negative), summing these scales to get two scores for each project.
- Option 2c: Sum all rating of integration for each project creating a single scale with more negative values indicating more dis-integration.

However, after viewing the distribution of the integration and disintegration scores for each person's matrix at each wave, it became clear that combining the negative and positive sides of the scale (Options 2a and 2c) would result in a loss of important information about each matrix. I therefore chose to use option 2b,

summing all of the negative values in a matrix to obtain a disintegration score and summing all of the positive values in a matrix to obtain an integration score. Additionally, there is some precedent for viewing identity as two constructs, identity coherence and confusion (see Schwartz, Zamboanga, Wang, & Olthuis, 2009). I therefore constructed four indices: 1) a sum Contextual Integration Index the ten projects the individual culled from the original 15 projects and 2) a sum Contextual Disintegration Index for all ten projects (Option 1c), 3) a sum Contextual Integration Index for only those projects rated as four or above on the composite important variable and 4) a sum Contextual Disintegration Index for only those projects rated as four or above on the composite importance variable (Option 1a, see above). The means and standard deviations for the Contextual Disintegration Index and Contextual Integration Index for these two methods can be seen in Table 20. I then conducted a series of Pearson's zero-order correlations to determine if Option 1a or 1c demonstrated the strongest associations with existing measures of identity, see Table 21 and Table 22.

Overall the results indicated a fairly similar pattern of results in associations with existing measures of identity and the two options: one including only the ten projects culled from the original 15 as most important and one including only those further rated as "important" on the composite measure by participants. Given this pattern of the results and the significant loss in data, particularly for qualitative analysis (a loss of about half of the projects for each participant on average), the decision was made to use Option 1c with a combination of Options

2b and 2c in which two summed scores with all projects were calculated, one from the sum of the positive rankings (Contextual Integration) and one from a sum of the negative rankings (Contextual Disintegration). I note that within the body of the manuscript I also provide data on the number of zeros as well as the number of positive and negative rankings on average within each matrix. As zeros, which indicated projects that had neither a negative or positive impact on one another were interpreted to mean a lack of integration or disintegration they were not further analyzed in this study. Thus, all further analyses were conducted using the ten project summed Contextual Integration and Contextual Disintegration indices.

Appendix B

Development of matrix content coding manual. I used an individual case study method (see Syed, 2010) and inductive thematic analysis (Braun & Clarke, 2006) in order to obtain an in-depth understanding of the content of each individual's *Integration Matrices* over time. Initially, I collected and organized all *Integration Matrices* for each individual as a single case study, by creating a chart listing all ten projects for each individual at all time points. See Tables 23 and 24 for two examples of a project list developed for coding and coded as *Intimacy Development* and *Identity and Intimacy Development.*

Following this, I adapted Braun and Clarke's (2006) thematic analysis to inductively identify patterns in the projects nominated in the four combined lists. Myself and two undergraduate coders focused on the content of these projects as

written by participants, meaning on the specific goals and plans that they identify. However, as this is a case study analysis of all four matrices, we also paid attention to development processes over the waves of data collection. The first phase in the process laid out by Braun and Clarke (2006) is to *familiarize yourself with the data*, thus myself and the undergraduate coders read and reread the matrices over the course of several months. The second phase is to *generate initial codes*. In this phase, we developed short phrases that encompassed the theme of each individual's matrices (e.g. "identity growing over time to intimacy" or "a to do list with attention to body image) Braun & Clarke, 2006). This was done through a discussion of patterns over time in the content of the matrices.

Particular attention was paid to the Eriksonian (1968) developmental tasks in emerging adulthood: identity and intimacy (see Braun & Clarke, 2006). Thus, while this process was largely inductive it was driven by a developmental and master narrative lens (Erikson, 1968; McLean & Syed, 2016). The third phase in Braun and Clarke's (2006) methodology is to *search for themes*. In this phase, a large list of codes was generated and then explored by the author and coders in order to identify themes and we began to sort matrices into smaller coding categories. In the fourth phase, *reviewing of themes*, the matrices were revisited under their new codes, and codes generated will be refined. In the reviewing of themes stage we had eight themes: *To Do List, Committed Identity, Be A Better Person, Social Influence, Identity and Intimacy Development, Identity to Maintenance, and Intimacy Development.*

In the fifth phase, *defining and naming of themes*, codes were defined and named in a coding manual. This coding manual had five final codes: Task Maintenance, Committed Identity, Identity Development, Identity and Intimacy Development, and Intimacy Development. See Table 25 for the final coding manual for this project.

Each individual's combined list of four waves of projects from the of *Integration Matrices* were then coded using the coding manual, with 26% of cases coded by a trained pre-selected undergraduate reliability coder to reach sufficient reliability (Syed & Nelson, 2015). These codes were then used in further exploratory analyses using the established contextual integration trajectory groups, disintegration index, psychological health, personality and identity variables. See manuscript body for a description of results of coding analysis as well as reliability for all codes.

Appendix C

Content coding and contextual integration trajectory group. Analyses were conducted to determine if individuals were more likely than chance to fall into certain content coding groups and contextual integration trajectory groups. There were significant differences in terms of how likely an individual was to be in content coding category and in a contextual integration trajectory group (χ^2 (8) = 19.92, p = .01). Importantly, the cell counts for these cross-tabbed categories were very small and thus any conclusions should be taken with caution. These differences were such that individuals in the *Low-Small Decrease* trajectory were

more likely than chance to have content related to *Intimacy Development, Task Maintenance,* and *Self-Development,* and less likely to have *Identity and Intimacy and Committed Identity Content.* Individuals in the *Moderate-Small Increase* trajectory group were more likely than chance to have content with both identity and intimacy components (*Identity and Intimacy*) and less likely to have all other matrix content. Finally, individuals in the *High-Moderate Decrease* trajectory group were more likely than chance to have content related to intimacy, either the *Identity and Intimacy* and *Intimacy Development* and less likely to have all other content codes. See Table 26 for a summary of these cross-tabulations.

Appendix D

Analysis of count of zeros in each matrix. A series of Pearson's zero-order correlations were conducted to determine if there were any significant associations between the count of zeros in participants' cross-impact matrix and the psychological health and identity variables. Given the large number of tests already conducted in the pre-registered portion of this study as well the unregistered and post-hoc nature of these analyses they are presented in the appendix and will not be interpreted further.

Associations between psychological health variables and zero count in matrix. With regards to negative affect, a negative and statistically significant correlation was found with count of zeros in the matrix only at W3 (*r's* W1-W4 = -.10, .01, -.18, -.09). In terms of positive affect, the number of zeros in the matrix was negatively and statistically significantly related to positive affect at W1, W2,

and W4 (*r's* W1-W4 = -.35, -.22, -.17, .-23). In terms of satisfaction with life, no statistically significant relationships were found at any wave (*r's* W1-W4 = -.05, -.15, -.05, -.01) In terms of personality psychopathology, trait antagonism had a negative and statistically significant relationship with zero count at W1 only (*r's* W1-W4 = -.20, -.001, -.16, -.06). Detachment had a positive and statistically significant association with zero-count at W2 only (*r's* W1-W4 = .01, .24, .07, .12) Trait disinhibition was statistically significantly and negatively correlated with the number of zeros only at W3 (*r's* W1-W4 = -.12, -.002, -.20, -.08). Trait psychoticism was also statistically significantly and negatively related to count of zeros only at W3 (*r's* W1-W4 = -.10, -.09, -.22, -.07). Finally, negative affect (*r's* W1-W4 = .03, -.02, -.15, -.004) had no statistically significant associations with the count of zeros in the matrix at any wave.

Associations between identity variables and zero count in matrix

Identity confusion and the count of zeros in the cross-impact matrix were not statistically significant associated at any waves (*r's* W1-W4 = .04, .13, -.06, .08). However, identity coherence did have a negative and statistically significant relationship with the count of zeros at W1 and W4 (*r's* W1-W4 = -.22, -.09, -.09, -.20).

In terms of educational identity development, the count of zeros did not have a significant association at any wave with zero count and commitment to educational identity (*r's* W1-W4 = .-.07, -.05, .07, .10) or reconsideration of educational identity (*r's* W1-W4 = .09, -.07, -.11, .14). In-depth exploration of

educational identity (*r's* W1-W4 = -.16, -.11, -.02, -.18), was negatively and statistically significantly associated with the count of zeros in the cross-impact matrix but only at W4.

In-depth exploration of relationship identity was negatively statistically significantly associated with the count of zeros in the cross-impact matrix at W1 and W4 (*r's* W1-W4 = -.23, -.13, -.17, -.18). Commitment to relationship identity (*r's* W1-W4 = -.14, -.13, .08, -.07) was not statistically significantly related to count of zeros at any wave, however reconsideration of relationship identity was positively and statistically significantly related to count of zeros at W2 (*r's* W1-W4 = .15, .18, .-.07, .05).

Table 1

Means (standard deviations) for identity, psychological health, and personality variables at all waves of data collection.

	W1	W2	W3	W4
N	189	185	184	150
% Female	76%	76%	74%	79%
EPSI (*Scale Range* = 1 – 5)				
Confusion	2.88 (.71)	2.73 (.71)	2.69 (.82)	2.67 (.74)
Coherence	3.62 (45)	3.67 (.47)	3.65 (.53)	3.69 (.46)
U-MICS (*Scale Range* = 1 -5)				
Education Commitment	4.15 (.62)	4.18 (.67)	4.12 (.58)	4.11 (.68)
Education In-depth Exploration	3.70 (.66)	3.80 (.68)	3.68 (.70)	3.67 (.66)
Education Reconsider Commitments	2.12 (.80)	2.05 (.79)	1.98 (.71)	1.97 (.73)
Relationship Commitment	4.21 (.70)	4.11 (.74)	4.07 (.71)	4.18 (.71)
Relationship In-depth Exploration	3.92 (.65)	3.91 (.67)	3.83 (.68)	3.86(.73)
Relationship Reconsider Commitments	1.62 (.82)	1.70 (.88)	1.74 (.95)	1.53 (.66)
PANAS-X (*Scale Range* = 1 – 5)				
Negative Affect	2.08 (.62)	2.17 (.65)	2.04 (.61)	2.04 (.62)
Positive Affect	3.26 (.79)	3.17 (.75)	3.15 (.75)	3.15 (.79)
SWLS (*Scale Range* = 1 – 7)	5.10 (1.16)	5.07 (1.14)	5.06 (1.21)	5.15 (1.24)
PID-5 Traits (*Scale Range* = 1 – 4)				
Detachment	1.67 (.46)	2.01 (.45)	1.62 (.47)	1.58 (.45)
Disinhibition	1.76 (.47)	1.69 (.47)	1.64 (.46)	1.61 (.45)
Psychoticism	1.71 (.51)	1.59 (.54)	1.52 (.53)	1.45 (.48)
Antagonism	1.72 (.48)	1.66 (.50)	1.64 (.46)	1.62 (.47)
Negative Affect	2.16 (.61)	2.12 (.61)	2.07 (.60)	2.05 (.60)
BFAS Domains (*Scale Range* = 1 – 5)				
Neuroticism	2.91 (.66)	2.90 (.65)	2.87 (.62)	2.84 (.65)
Agreeable	3.93 (.40)	3.94 (.41)	3.93 (.45)	4.00 (.46)
Conscientiousness	3.39 (.51)	3.41 (.47)	3.43 (.49)	3.48 (.50)
Extraversion	3.57 (.56)	3.53 (.55)	3.52 (.55)	3.55 (.54)
Openness/Extra	3.76 (.46)	3.71 (.47)	3.73 (.47)	3.73 (.47)

Table 2

Gender differences for male (M) and Female (F) in identity, psychological health, and personality variables at waves one and two

	W1				W2			
	M *M(SD)*	F *M(SD)*	*t*-value	*Cohen's d*	M *M(SD)*	F *M(SD)*	*t*-value	*Cohen's d*
Identity Confusion	2.73(.73)	2.92(.70)	-.16	.27	2.67(.65)	2.75(.73)	-.62	.11
Identity Coherence	**3.78(.37)**	**3.58(.46)**	**2.61,**	**.48**	3.71(.48)	3.66(.46)	.	.12
Education Commitment	4.12(.62)	4.15(.62)	.03	.06	4.00(.67)	4.23(.66)	-1.98	.34
Education In-depth Exploration	3.71(.67)	3.71(.66)	.00, 1.00	.00	3.72(.68)	3.82(.68)	-.80,	.14
Education Reconsider Commitments	2.09(.85)	2.13(.78)	-.35,	.06	2.19(.76)	2.01(.81)	1.26,	.22
Relationship Commitment	4.09(.66)	4.24(.71)	-.1.21	.21	3.95(.80)	4.16(.72)	-1.57	.27
Relationship In-depth Exploration	3.88(.66)	3.93(.65)	-.40	.11	3.87(.58)	3.92(.70)	-.44	.08
Relationship Reconsider Commitments	1.70(.78)	1.61(.83)	.6	.10	**1.96(.94)**	**1.62(.85)**	**2.25**	**.38**
Negative Affect	2.12(.50)	2.07(.66)	-.54	.10	2.24(.58)	2.16(.67)	.70,	.13
Positive Affect	3.42(.79)	3.20(.78)	-1.62	.28	3.22(.73)	3.16(.77)	.49	.09
SWLS	4.98(1.27)	5.14(1.14)	-.80	.13	5.10(1.21)	5.05(1.13)	.26	.05
Detachment	1.70(.43)	1.65(.46)	.59	.10	2.03(.44)	2.10(.45)	-.84	.15
Disinhibition	**1.96(.42)**	**1.70(.47)**	**3.20**	**.57**	**1.85(.45)**	**.16(.47)**	**2.60**	**.46**
Psychoticism	**2.01(.48)**	**1.62(.48)**	**-.66**	**.80**	**1.82(.52)**	**1.51(.51)**	**3.40**	**.59**
Antagonism	**1.99(.52)**	**1.63(.43)**	**4.53**	**.75**	**1.87(.50)**	**1.58(.47)**	**3.43**	**.59**
Negative Affect	2.21(.56)	2.14(.62)	.69	.12	2.09(.63)	2.12(.61)	-.35	.06
Neuroticism	2.83(.70)	2.94(.65)	-.95	.16	**2.73(.62)**	**2.96(.65)**	**-2.05**	**.36**
Agreeable	3.87(.39)	3.96(.40)	-1.32	.23	**3.80(.39)**	**3.98(.41)**	**-2.57**	**.46**
Conscientiousness	3.28(.51)	3.42(.51)	-1.63	.28	3.31(.45)	3.44(.48)	-1.68	.30
Extraversion	3.61(.50)	3.56(.58)	.60	.11	3.55(.53)	3.53(.55)	= .35	.06
Openness/Extra	3.74(.44)	4.77(.46)	-.32	.06	3.79(.48)	3.68(.47)	1.33	.23

Note. **Bolded** values are significant at $p < .05$

Table 3

Gender differences for male (M) and Female (F) in identity, psychological health, and personality variables at waves three and four

	W3				W4			
	M *M(SD)*	F *M(SD)*	*t*-value	*Cohen's d*	M *M(SD)*	F *M(SD)*	*t*-value	*Cohen's d*
Identity Confusion	2.70(.78)	2.68(.84)	.08	.01	2.70(.57)	2.66(.77)	.28	.06
Identity Coherence	3.77(.59)	3.62(.50)	1.65	.27	3.78(.42)	3.67(.47)	1.23	.25
Education Commitment	**3.84(.66)**	**4.18(.55)**	**-2.37**	**.39**	**3.81(.42)**	**4.19(.61)**	**-2.87**	**.52**
Education In-depth Exploration	3.64(.65)	3.69(.72)	-.40	.07	3.67(.65)	3.67(.66)	.01	.00
Education Reconsider Commitments	2.11(.73)	1.94(.74)	1.36	.24	2.17(.73)	1.91(.72)	1.76	.35
Relationship Commitment	3.99(.82)	4.09(.68)	-.81	.13	1.51(.60)	1.54(.68)	-.21	.04
Relationship In-depth Exploration	3.88(.58)	3.81(.71)	.58\	.11	4.11(.73)	4.21(.71)	-.60	.14
Relationship Reconsider Commitments	**2.07(1.06)**	**1.64(.89)**	**.2.67**	**.44**	3.78(.73)	3.89(.73)	-.79	.16
Negative Affect	2.09(.59)	2.02(.62)	.62	.11	2.17(.71)	2.00(.59)	1.37	.26
Positive Affect	3.24(.64)	3.12(.79)	.94	.17	3.34(.76)	3.09(.80)	1.57	.32
SWLS	5.02(1.25)	5.07(1.21)	-.24	.04	5.312(1.04)	5.10(.129)	.89	.19
Detachment	1.63(.37)	1.61(.49)	.25	.05	1.61(.41)	1.57(.46)	.50	.10
Disinhibition	**1.83(.37)**	**1.59(.46)**	**3.07**	**.54**	**1.86(.46)**	**1.54(.43)**	**3.58**	**.70**
Psychoticism	**1.81(.56)**	**1.42(.48)**	**4.56**	**.76**	**1.70(.49)**	**1.38(.46)**	**3.39**	**.66**
Antagonism	**1.88(.47)**	**1.56 (.44)**	**4.14**	**.70**	**1.88 (.52)**	**1.55 (.43)**	**3.73**	**.71**
Negative Affect	2.09(.58)	2.06(.61)	.24	.04	2.07(.50)	2.04(.62)	.24	.05
Neuroticism	2.77(.56)	2.91(.64)	-.2.48	.23	2.71(.57)	2.87(.67)	-1.23,	.26
Agreeable	**3.79(.40)**	**3.98(.46)**	**-2.48**	**.45**	3.87(.40)	4.03(.47)	-1.76	.37
Conscientiousness	3.32(.41)	3.47(.51)	-1.77	.32	**3.29 (.40)**	**3.53 (.52)**	**-2.36**	**.51**
Extraversion	3.50(.50)	3.53(.56)	-.33	.06	3.55(.47)	3.55(.57)	.08	.02
Openness/Extra	3.76(.48)	3.72(.47)	.50	.09	3.75(.50)	3.73(.47)	.30	.06

Note. **Bolded** values are significant at p <.05

Table 4

Means (standard deviations) and ranges for all personal projects variables at all waves of data collection.

	W1			W2			W3			W4		
	Overall M(SD)	Male M(SD)	Female M(SD)	Overall M(SD)	Male M(SD)	Female M(SD)	Overall M(SD)	Male M(SD)	Female M(SD)	Overall M(SD)	Male M(SD)	Female M(SD)
# of Projects	9.92(.50)	9.95(.30)	9.90(.55)	9.44(1.84)	9.59(1.70)	9.40(1.89)	9.43(1.91)	9.70(.93)	9.34(2.13)	7.49(4.05)	6.80(4.56)	7.76(3.83)
Integration	37.07 (24.22)	40.74 (26.41)	35.45 (23.57)	32.94 (20.40)	34.37 (19.30)	32.88 (20.79)	30.36 (25.68)	32.13 (30.37)	27.85 (21.02)	25.61 (20.60)	29.65 (26.60)	25.82 (18.79)
Disintegration	18.69 (24.13)	25.00 (24.75)	18.70 (25.26)	21.05 (25.88)	27.00 (29.93)	20.90 (26.75)	18.67 (23.68)	25.19 (21.51)	18.16 (25.65)	23.57 (28.91)	32.13 (34.33)	21.34 (27.05)
Zeros	49.24 (18.78)	43.33 (20.55)	50.84 (18.05)	46.34 (20.78)	43.17 (18.30)	47.20 (21.40)	51.78 (22.12)	42.61* (22.02)	54.27* (21.58)	46.91 (24.11)	41.61 (22.71)	48.29 (24.48)
Negative s	14.23 (14.85)	17.30 (14.75)	13.41 (14.96)	16.35 (18.07)	19.63 (18.96)	15.47 (17.81)	14.23 (15.82)	18.84 (14.66)	12.98 (15.95)	17.11 (17.98)	23.65* (22.58)	15.40* (16.27)
Positives	26.82 (15.21)	29.23 (16.86)	26.16 (13.75)	23.55 (13.31)	25.20 (13.50)	23.11 (13.28)	20.74 (15.76)	23.03 (21.25)	20.11 (13.95)	19.27 (14.16)	20.58 (17.44)	18.93 (13.25)

Note. * Indicates a statistically significant gender difference.

Table 5

Wave one zero-order correlations between Contextual Integration and Contextual Disintegration Indices and psychological health variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Integration	--									
2. Disintegration	-.10	--								
3. PANAS Negative	.11	-.02	--							
4. PANAS Positive	**.24***	**.18**	-.10	--						
5. SWLS	.04	.09	**-.48***	**.41***	--					
6. Detachment	.01	-.07	**.44***	**-.43***	**-.57***	--				
7. Disinhibition	.09	.04	**.34***	.02	**-.22***	**.29***	--			
8. Psychoticism	.15	-.00	**30***	.13	**-.27***	**.38***	**.66***	--		
9. Antagonism	.16	.11	**.18**	.10	-.14	**.32***	**.43**	**.50***	--	
10. Negative Affect	.05	-.06	**.49***	-.13	**-.42***	**.28***	**.42***	**.50***	**.32***	--

Note. Bolded values are statistically significant at $p < .05$, a * indicates significant at $p < .01$.

Table 6

Wave two zero-order correlations between Contextual Integration and Contextual Disintegration Indices and psychological health variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Integration	--									
2. Disintegration	-.02	--								
3. PANAS Negative	.04	.00	--							
4. PANAS Positive	**.17**	.11	**-.22***	--						
5. SWLS	-.08	.03	**-.34***	**.40***	--					
6. Detachment	-.09	-.08	**.50***	**-.57***	**-.55***	--				
7. Disinhibition	-.01	.01	**.44***	**-.17***	**-.25***	**.41***	--			
8. Psychoticism	.05	.06	**.28***	-.04	**-.21***	**.35***	**.67***	--		
9. Antagonism	-.05	-.01	**.26***	.03	-.05	**.27***	**.55***	**.52***	--	
10. Negative Affect	.01	-.01	**.44***	**-.24***	**-.38***	**.52***	**.45***	**.47***	**.35***	--

Note. Bolded values are statistically significant at $p < .05$, a * indicates significant at $p < .01$.

Table 7

Wave three zero-order correlations between Contextual Integration and Contextual Disintegration Indices and psychological health variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Integration	--									
2. Disintegration	-.08	--								
3. PANAS Negative	.00	.10	--							
4. PANAS Positive	.07	.08	**-.18**	--						
5. SWLS	.07	.05	**-.50***	**.51***	--					
6. Detachment	-.05	-.12	**.44***	**-.49***	**-.59***	--				
7. Disinhibition	.04	.00	**.32***	-.12	**-.25***	**.42***	--			
8. Psychoticism	.13	.01	**.25***	-.03	**-.24***	**.41***	**.68***	--		
9. Antagonism	.12	-.03	**.27***	-.08	**-.19**	**.36***	**.54***	**.54***	--	
10. Negative Affect	.06	.00	**.53***	**-.28***	**-.49***	**.47***	**.51***	**.50***	**.35***	--

Note. Bolded values are statistically significant at $p < .05$, a * indicates significant at $p < .01$.

Table 8

Wave four zero-order correlations between Contextual Integration and Contextual Disintegration Indices and psychological health variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Integration	--									
2. Disintegration	-.07	--								
3. PANAS Negative	.11	-.06	--							
4. PANAS Positive	**.25***	.00	-.14	--						
5. SWLS	.03	-.03	**-.46***	**.44***	--					
6. Detachment	**-.18**	-.05	**.41***	**-.49***	**-.58***	--				
7. Disinhibition	.00	.04	**.36***	-.08	**-.24***	**.38***	--			
8. Psychoticism	.04	.00	**.23***	.07	**-.17**	**.35***	**.67***	--		
9. Antagonism	.05	.04	.12	-.03	-.11	**.29***	**.51***	**.49***	--	
10. Negative Affect	.00	-.03	**.54***	**-.26***	**-.43***	**.40***	**.51***	**.45***	**.34***	--

Note. Bolded values are statistically significant at $p < .05$, a * indicates significant at $p < .01$.

Table 9

Fit statistics for Contextual Integration Index Group Based Trajectory Model, N = 189

	ssBIC	Entropy	BLRT	LMR	Count Smallest	Posterior Probabilities
Two group						
Linear	6331.89	.82	-3213.98, p <.001	107.87, p = .01	40 (21%)	98%, 94%
Quadratic	6335.69	.82	-3213.96, p < .001	109.82, p - .01	42 (22%)	87%, 97%
Three group						
Linear	**6302.18**	**.87**	**-3156.61, p <.001**	**33.78, p=.01**	**21 (11%)**	**97%, 92%, 87%**
Quadratic	6306.12	.88	-3156.44, p <.001	**36.14, p = .07**	22 (12%)	86%, 99%, 87%

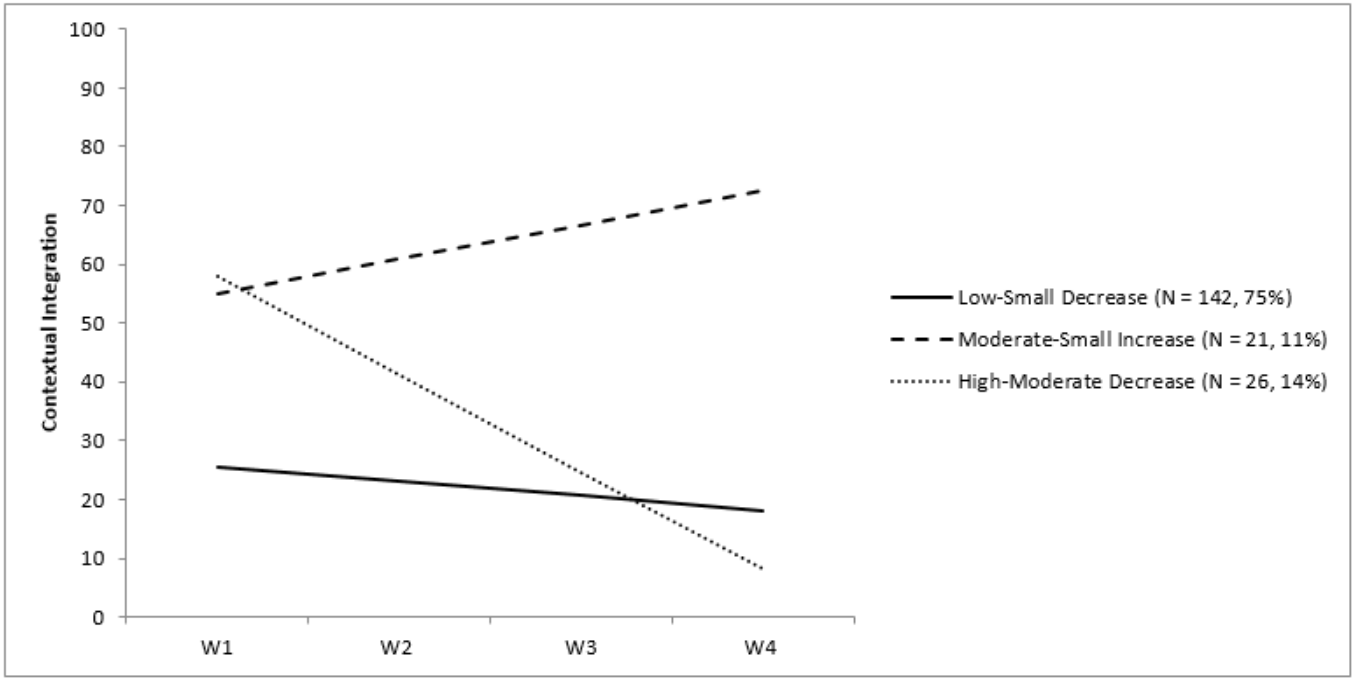

Figure 1. Graph of the three-group linear solution for contextual integration. Note that trajectories are graphed with a vertical axis from 0-100 rather than 0-180 as indicated by the full possible range of the variable in order to show detail of trajectories.

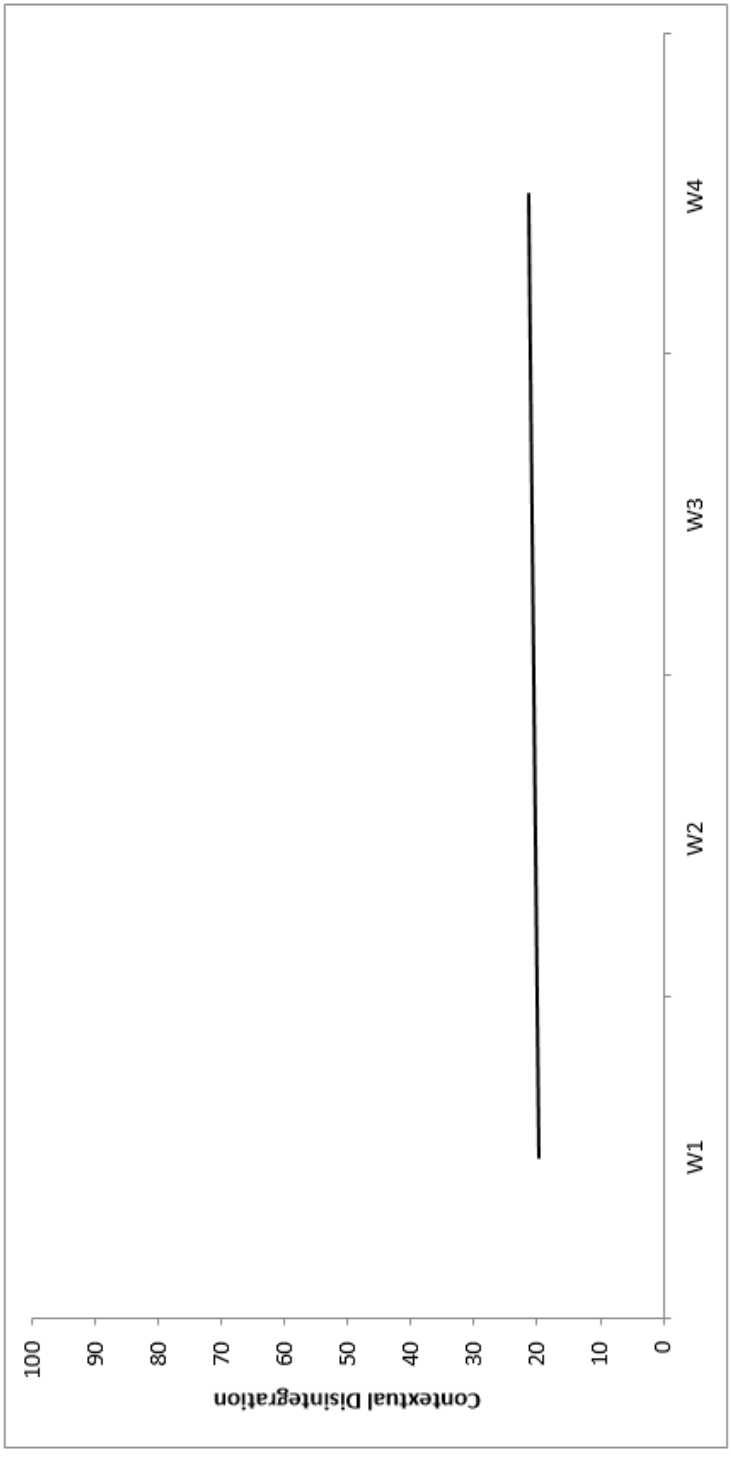

Figure 2. Graph of the single-class solution for contextual disintegration.

Table 10
Characteristics of Contextual Integration Index trajectory groups

	1. Low-Small Decrease	2. Moderate-Small Increase	3. High-Moderate Decrease	*F* (2, 147)	Cohen's D 1-2	Cohen's D 1-3	Cohen's D 2-3
N	142	21	26				
% Female	79	71	65				
W4 Identity confusion	2.67 (.74)	2.86 (.57)	2.48 (.84)	1.16, p = .31	0.29	0.23	0.52
W4 Identity coherence	3.64 (.44)	3.83 (.43)	3.86 (.54)	2.68, *p* = .07	0.43	0.43	0.05
W4 Educational identity commitment	4.08 (.65)	4.21 (.54)	4.20 (.95)	.44, *p* = .65	0.21	0.14	0.02
W4 Educational In-depth Exploration	**3.57 (.66)**	**3.94 (.42)**	**4.01 (.66)**	**5.62, *p* = .004**	**0.67**	**0.66**	**0.12**
W4 Education Reconsider Commitments	1.98 (.74)	1.84 (.72)	2.02 (.73)	.30, *p* = 74	0.18	0.06	0.24
W4 Relationship Commitment	4.15 (.71)	4.27 (.73)	4.28 (.73)	.41, *p* = .67	0.16	0.18	0.02
W4 Relationship In-depth Exploration	3.85 (.72)	3.95 (.77)	3.84 (.76)	.28, *p* =.76	0.19	0.02	0.16
W4 Relationship Reconsider Commitments	1.58 (.67)	1.37 (.63)	1.39 (.57)	1.27, *p* = .28	0.32	0.31	0.02
W4 Negative affect	**2.03 (.56)**	**2.42 (.85)**	**1.76 (.62)**	**5.45, *p* = .01**	**0.55**	**0.45**	**0.89**
W4 Positive affect	**3.03 (.79)**	**3.59 (.56)**	**3.44 (.83)**	**5.41, *p* <.001**	**0.82**	**0.50**	**0.21**
SWLS	5.14 (1.26)	4.93 (1.18)	5.39 (1.24)	.62, *p* = .54	0.17	0.20	0.38
W4 PID-5 Detachment	1.61 (.44)	1.48 (.36)	1.48 (.52)	1.19, *p* =.31	0.33	0.27	0.01
W4 PID-5 Disinhibition	1.61 (.44)	1.63 (.44)	1.61 (51)	.03, *p* =.98	0.06	0.01	0.05

W4 PID-5 Psychoticism	1.43 (.49)	1.53 (.49)	1.47 (.48)	.32, p = .73	0.20	0.08	0.11
W4 PID-5 Antagonism	1.61 (.46)	1.66 (.47)	1.66 (.56)	.17, p = .84	0.11	0.10	0.00
W4 PID-5 Negative affect	2.05 (.59)	2.27 (.61)	1.81 (.59)	1.68, p =.07	0.37	0.40	0.76
W4 Neuroticism	2.85 (.62)	3.00 (.74)	2.57 (.74)	2.20, p =.11	0.22	0.42	0.59
W4 Agreeable	3.97 (.43)	4.21 (.46)	3.98 (.61)	2.16, p =.12	0.56	0.03	0.42
W4 Conscientiousness	3.48 (.52)	3.48 (.45)	3.47 (.50)	.002, p =.99	0.01	0.01	0.02
W4 Extraversion	3.50 (.54)	3.73 (.56)	3.67 (.51)	1.83, p =.16	0.41	0.32	0.10
W4 Openness/intellect	**3.67 (.47)**	**3.90 (.45)**	**3.93 (.42)**	**3.70, p =.03**	**0.49**	**0.56**	**0.05**

Table 11

Factor pattern matrix of standardized pathways between latent and observed personality variables

Observed Variable	Factor 1 Stability	Factor 2 Plasticity
Conscientiousness	.33, $p = .002$	
Emotional Stability (inverse of Neuroticism)	.65, $p < .001$	
Agreeableness	36, $p < .001$	
Extraversion		.69, $p < .001$
Openness		.49, $p < .001$

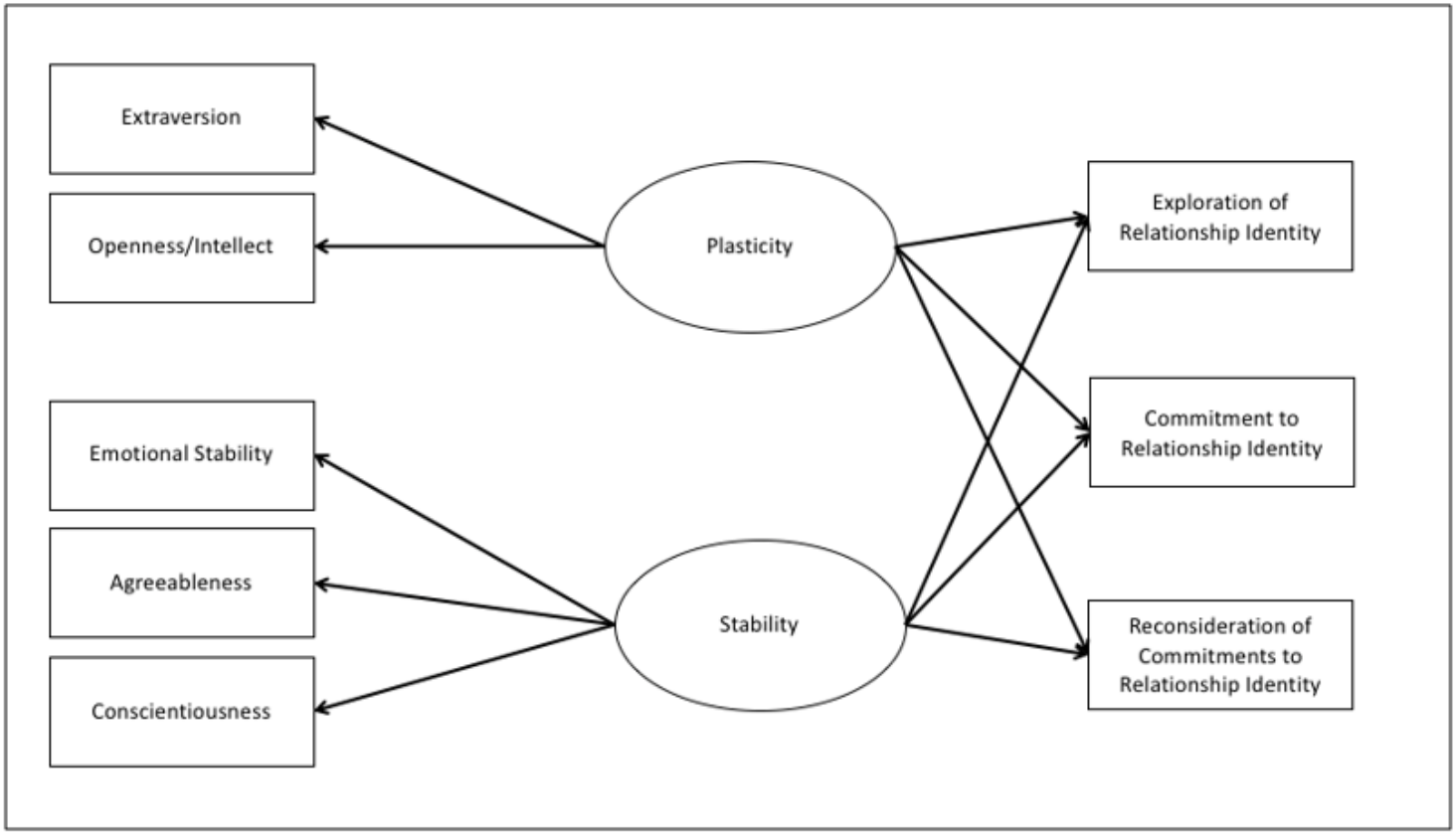

Figure 3. Examples of the SEM model to test moderation by plasticity and stability. This model was run once with all pathways from latent plasticity and stability and outcome variables constrained and once with all pathways unconstrained. Note that lines depicting correlations amongst outcome identity variables and manifest personality variables were omitted for clarity.

Table 12

Change in chi-square test model fit statistic for path models of moderation by latent personality meta-trait of the relationship between Contextual Integration Index trajectory group membership and identity and psychological health outcomes

	χ^2 Model Fit Unconstrained Model	χ^2 Model Fit Constrained Model	Change in χ^2 Model Fit
Identity confusion and coherence (EPSI)	χ^2 (43) = 74.95, p = .002	χ^2 (51) = 84.26, p = .002	χ^2 (8) = 9.31, *p* = .32
Educational identity (U-MICS education)	χ^2 (52) = 77.83, p = .01	χ^2 (64) = 90.92 , p = .02	χ^2 (12) = 13.09, *p* =.36
Relationship identity (U-MICS relationship)	χ^2 (52) = 85.26 p = .003	χ^2 (64) = 95.64, p = .01	χ^2 (12) = 10.38, *p* =.58
Negative and positive affect (PANAS-X)	χ^2 (43) 70.40, p = .01	χ^2 (51) = 78.91, p = .007	χ^2 (8) = 8.51, *p* = .39
Satisfaction with Life (SWLS)	χ^2 (34) 54.04 p = .02	χ^2 (38) = 58.00, p = .02	χ^2 (4) = 3.96, *p* =.41
Trait detachment, disinhibition, psychoticism, antagonism, and negative affect (PID-5)	χ^2 (70) = 275.79, p <.001	χ^2 (90) = 297.37, p <.001	χ^2 (20) = 21.58, *p* =.38

Table 13

Wave one zero-order correlations between Contextual Integration and Contextual Disintegration Indices and identity variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Integration	--									
2. Disintegration	-.10	--								
3. Identity confusion	-.03	-.06	--							
4. Identity coherence	**.18**	.16	**-.56***	--						
5. Educational identity commitment	**.17**	-.05	**-.18**	**.32***	--					
6. Educational in-depth exploration	**.26***	-.09	**-.24**	**.38***	.43*	--				
7. Education reconsider commitments	-.05	-.06	**.31***	**-.17**	-.16	-.15	--			
8. Relationship commitment	**.19**	-.01	-.08	**.21***	**.34***	**.230***	.00	--		
9. Relationship in-depth exploration	.14	.15	-.11	**.22***	.15	**.29***	-.92	**.51***	--	
10. Relationship reconsider commitments	-.09	-.14	**.23***	-.13	.04	-.01	**.26***	**-.41***	**-.29***	--

Note. **Bolded** values are statistically significant at $p < .05$, a * indicates significant at $p < .01$.

Table 14

Wave two zero-order correlations between Contextual Integration and Contextual Disintegration Indices and identity variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Integration	--									
2. Disintegration	-.02	--								
3. Identity confusion	-.04	-.08	--							
4. Identity coherence	.08	.04	**-.65***	--						
5. Educational identity commitment	.12	**-.21***	**-.29***	**.40***	--					
6. Educational in-depth exploration	.14	-.02	**-.22***	**.29***	**.52***	--				
7. Education reconsider commitments	.00	.05	**.30***	**-.34***	**-.31***	-.10	--			
8. Relationship commitment	.00	.11	**-.21**	**.26***	**.37***	**.26***	-.07	--		
9. Relationship in-depth exploration	.04	.11	**-.17**	**.29***	**.29***	**.39***	-.04	**.63***	--	
10. Relationship reconsider commitments	-.12	-.12	-.15	**-.18**	.00	-.08	**.16**	**-.43***	**-.21***	--

Note. **Bolded** values are statistically significant at $p < .05$, a * indicates significant at $p < .01$.

Table 15

Wave three zero-order correlations between Contextual Integration and Contextual Disintegration Indices and identity variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Integration	--									
2. Disintegration	-.08	--								
3. Identity confusion	.06	-.06	--							
4. Identity coherence	.09	.04	**-.59***	--						
5. Educational identity commitment	-.01	-.05	**-.20***	**.39***	--					
6. Educational in-depth exploration	.08	-.02	**-.25***	**.32***	**.51***	--				
7. Education reconsider commitments	-.04	.08	**-.21***	**-.27***	**-.20***	-.04	--			
8. Relationship commitment	-.01	-.06	-.13	**.33***	**.47***	**.28***	**-.17**	--		
9. Relationship in-depth exploration	.15	.12	-.09	**.20**	**.25***	**.29***	**-.15**	**.54***	--	
10. Relationship reconsider commitments	-.02	.00	.04	-.06	-.01	-.08	**.18**	**-.43***	**-.26***	--

Note. **Bolded** values are statistically significant at $p < .05$, a * indicates significant at $p < .01$.

Table 16

Wave four zero-order correlations between Contextual Integration and Contextual Disintegration Indices and identity variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Integration	--									
2. Disintegration	-.07	--								
3. Identity confusion	-.03	-.09	--							
4. Identity coherence	**.27***	.01	**-.58***	--						
5. Educational identity commitment	.09	-.15	**-.17**	**.26***	--					
6. Educational in-depth exploration	**.20**	-.01	**-.18**	**.34***	**.37***	--				
7. Education reconsider commitments	-.06	**.20**	**.19**	**-.24***	**-.18**	.00	--			
8. Relationship commitment	.05	.02	-.14	**.37***	**.36***	**.23**	**-.17**	--		
9. Relationship in-depth exploration	.08	**.21**	-.16	**.26***	**.17**	**.34**	-.07	**.66***	--	
10. Relationship reconsider commitments	-.13	-.03	.13	**-.25**	-.03	-.08	**.26***	**-.56***	**-.46***	--

Note. **Bolded** values are statistically significant at $p < .05$, a * indicates significant at $p < .01$.

Table 17

Means (standard deviations) and ANOVA test for all wave four outcomes and coding content categories.

	Task Maintenance	Committed Identity	Search for Self	Identity and Intimacy	Intimacy Development	*F* (4, 146)
W4 Identity Variables						
Identity confusion	**2.70 (.79)**	**2.10 (.49)**	**3.08 (.71)**	**2.62 (.67)**	**2.60 (.68)**	**4.20, *p* = .003**
Identity coherence	3.65 (.47)	3.98 (.39)	3.54 (.52)	3.70 (.50)	3.69 (.46)	2.08, *p* = .09
Educational commitment	4.00 (.57)	4.08 (1.16)	4.19 (.64)	4.15 (. 63)	3.15 (.68)	.39, *p* =.82
Educational in-depth exploration	3.45 (.70)	3.70 (.68)	3.76 (.59)	3.78 (.63)	3.76 (.67)	1.76, *p* =.14
Educational reconsideration of commitments	2.00 (.80)	1.92 (.47)	2.17 (.90)	1.87 (.63)	1.89 (.67)	.73, *p* =.14
Relationship commitment	4.01 (.72)	4.18 (.91)	4.13 (.86)	4.28 (.71)	4.32 (.54)	1.19, *p* =.32
Relationship in-depth exploration	3.67 (.78)	3.97 (.82)	4.18 (.67)	3.76 (.80)	3.91 (.59)	2.19, *p* =.07
Relationship reconsideration of commitments	1.72 (.74)	1.44 (.72)	1.51 (.67)	1.59 (.59)	1.36 (.67)	1.87, *p* =.12
W4 Psychological Health Variables						
PANAS-X						
Negative Affect	2.02 (.55)	1.94 (.52)	2.30 (.79)	2.04 (.55)	1.93 (.62)	1.54, *p* =.19
Positive Affect	3.11 (.80)	3.33 (.96)	2.97 (.79)	3.07 (.78)	3.26 (.76)	.76, *p* =.55
SWLS	5.02 (1.40)	5.67 (1.10)	4.71 (.88)	4.94 (1.31)	5.47 (1.16)	2.46, *p* =.05
PID-5 Traits						
Detachment	**1.62 (.47)**	**1.22 (.20)**	**1.86 (.34)**	**1.47 (.32)**	**1.55 (.49)**	**5.48, *p* <.001**
Disinhibition	**1.61 (.45)**	**1.33 (.27)**	**1.82 (.54)**	**1.53 (.33)**	**1.62 (.46)**	**2.89, *p* =.03**
Psychoticism	**1.35 (.41)**	**1.39 (.60)**	**1.73 (.62)**	**1.41 (.40)**	**1.43 (.44)**	**2.59, *p* =.04**
Antagonism	1.60 (.45)	1.28 (.21)	1.69 (.44)	1.62 (.43)	1.68 (.55)	1.98, *p* =.10
Negative Affect	**1.92 (.52)**	**1.86 (.47)**	**2.35 (.68)**	**2.16 (.64)**	**1.99 (.58)**	**2.90, *p* =.02**

W4 Personality Variables						
Neuroticism	**2.81 (.62)**	**2.52 (.44)**	**3.12 (.66)**	**2.98 (.62)**	**2.72 (.70)**	**2.58, p =.04**
Agreeable	3.93 (.43)	4.27 (.33)	3.93 (.58)	4.13 (.46)	3.95 (.42)	2.14, p = .08
Conscientious	3.45 (.56)	3.78 (.32)	3.35 (.55)	3.45 (.48)	3.51 (.46)	1.52, p =.20
Extraversion	3.48 (.52)	3.84 (.58)	2.41 (.42)	3.64 (.46)	3.55 (.63)	1.62, p =.17
Openness/Intellect	3.64 (.42)	3.79 (.61)	3.79 (.41)	3.70 (.57	3.79 (.46)	.74, p =.56

Note. **Bolded** values were significant at $p < .05$.

Table 18

Means (standard deviations) and ANOVA test for domain type and coding content categories.

	Task Maintenance	Committed Identity	Search for Self	Identity and Intimacy	Intimacy Development	*F* (4, 146)
Academic	**10.20 (3.90)**	**10.08 (4.25)**	**7.29 (3.83)**	**7.64 (2.43)**	**7.74 (3.25)**	**6.03 *p* <.001**
Occupational	**4.12 (2.27)**	**7.08 (2.57)**	**4.06 (2.22)**	**3.61 (1.73)**	**3.91 (2.38)**	**6.26 *p* <.001**
Health/Body	5.76 (2.94)	5.15 (3.00)	5.66 (2.46)	5.24 (2.57)	5.64 (2.65)	.28 *p* =.88
Interpersonal	**4.62 (3.00)**	**5.92 (4.41)**	**5.66 (2.57)**	**6.52 (2.85)**	**7.98 (3.31)**	**8.31 *p* <.001**
Intrapersonal	**3.31 (2.52)**	**4.15 (3.44)**	**7.03 (4.16)**	**6.70 (2.91)**	**4.82 (2.84)**	**10.59 *p* <.001**
Leisure	4.58 (3.05)	2.92 (1.66)	4.26 (2.80)	3.58 (2.41)	4.23 (2.66)	1.40 *p* =24
Maintenance	3.18 (2.55)	2.08 (2.55)	2.74 (2.28)	3.42 (2.51)	3.32 (2.24)	1.11 *p* =.35

Note. Bolded values indicate significant *F*-test at $p < .001$

Table 19

Appendix A - Important projects analysis to determine which option to use in construction of Contextual Integration and Disintegration Indices.

		W1	W2	W3	W4
Mean # of Projects ≤ 4 Importance Composite Number (Proportion) Projects ≤ 4 Importance Composite Variable		5.45 (2.34)	5.13 (2.38)	5.33 (2.34)	4.88 (2.34)
	Project 1	146 (77%)	119 (64%)	128 (70%)	98 (65%)
	Project 2	125 (66%)	117 (63%)	118 (64%)	87 (58%)
	Project 3	119 (63%)	105 (57%)	118 (64%)	74 (49%)
	Project 4	99 (53%)	102 (55%)	98 (53%)	85 (57%)
	Project 5	105 (56%)	105 (57%)	105 (57%)	62 (51%)
	Project 6	102 (54%)	91 (49%)	83 (45%)	62 (41%)
	Project 7	89 (47%)	81 (44%)	80 (44%)	61 (41%)
	Project 8	81 (43%)	81 (44%)	83 (45%)	64 (43%)
	Project 9	83 (44%)	65 (35%)	69 (38%)	50 (33%)
	Project 10	72 (38%)	58 (31%)	66 (36%)	48 (32%)
Total Projects Rated ≤ 4 Importance Composite Variable		1021	924	948	691

Table 20

Appendix A – Comparing means of Contextual Integration and Contextual Disintegration Indices for all projects and for just important projects

	All Projects			≤ 4 Importance Composite		
	Min	Max	M(SD)	Min	Max	M(SD)
W1 Disintegration	0	126	20.49 (25.93)	0	71	10.22 (14.57)
W1 Integration	0	109	36.83 (24.11)	0	96	21.36 (19.20
W2 Disintegration	0	150	22.28 (26.62)	0	88	12.35 (16.15)
W2 Integration	0	82	33.56 (19.33)	0	79	19.66 (16.43)
W3 Disintegration	0	154	20.22 (24.99)	0	79	11.16 (15.39)
W3 Integration	0	141	30.07 (23.91)	0	116	17.14 (18.58)
W4 Disintegration	0	159	23.85 (28.83)	0	124	13.91 (22.91)
W4 Integration	0	115	27.68 (20.99)	0	70	14.35 (12.54)

Table 21

Appendix A- Concurrent Pearson's zero-order correlations between contextual integration and disintegration and existing identity variables at wave 1 and wave 2 for just important and all projects

	W1 Just Important		W1 All Projects		W2 Just Important		W2 All Projects	
	Disintegration	Integration	Disintegration	Integration	Disintegration	Integration	Disintegration	Integration
Identity confusion	.03, p = .76	-.08, p = .36	-.03, p = .72	-.04, p = .66	**-.19, p = .03**	-.14, p = .	-.10, p = .24	-.03, p = .72
Identity coherence	.17, p =.06	**.21, p = .02**	.14, p = .12	**.19, p = .03**	.13, p = .13	**.18, p = .04**	-.01, p = .95	.10, p = .25
Educational commitment	.01, p =.89	**.22, p = .01**	-.09, p = .34	**.19, p = .03**	-.10, p = .25	.08, p = .34	**-.18, p = .04**	.09, p = .32
Educational in-depth exploration	-.05, p = .54	**.29, p < .01**	-.11, p = .21	**.29, p < .01**	.17, p = .06	**.17, p = .05**	.04, p = .66	.11, p = .20
Educational reconsideration of commitments	-.07, p = .40	-.08, p = .39	-.06, p = .49	-.09, p = .39	.03, p = .75	-.07, p = .45	.03, p = .77	.02, p = .80
Relationship commitment	.01, p = .40	**.20, p = .03**	-.02, p = .85	**.20, p = .02**	**.20, p = .02**	.08, p = .36	.10, p = .25	-.04, p = .65
Relationship in-depth exploration	**.23, p = .01**	.10, p = .25	**.18, p = .04**	.14, p = .12	**.28, p <.01**	.13, p = .15	.11, p = .22	.05, p = .55
Relationship reconsideration of commitments	-.16, p = .07	-.04, p = .65	-.16, p = .07	-.06, p = .52	**-.20, p = .02**	-.13, p = .14	-.14, p = .11	-.02, p = .29

Note. **Bolded** values indicate $p < .05$

Table 22

Appendix A - Concurrent Pearson's zero-order correlations between contextual integration and disintegration and existing identity variables at wave 3 and wave 4 for just important and all projects

	W3 Just Important		W3 All Projects		W4Just Important		W4 All Projects	
	Disintegration	Integration	Disintegration	Integration	Disintegration	Integration	Disintegration	Integration
Identity confusion	.00, p = .98	.01, p = .93	-.04, p = .61	.08, p = .34	-.06, p = .53	.06, p = .49	-.10, p = .27	.03, p = .77
Identity coherence	-.02, p = .72	**.90, p = .30**	.02, p = .79	**.07, p = .41**	.13, p = .16	**.26, p <.001**	-.01, p = .91	**.24, p = .01**
Educational commitment	.00, p = .96	-.07, p = .46	-.01, p = .91	-.09, p = .31	.03, p = .73	.13, p = .15	-.08, p = .35	.00, p = .99
Educational in-depth exploration	.02, p = .86	.09. p = .33	-.02, p = .79	.03, p = .72	-.01, p = .92	.17, p = .06	.05, p = .56	**.17, p = .05**
Educational reconsideration of commitments	.15, p = .09	.01, p = .91	.12, p = .18	-.02, p = .84	**.14, p = .12**	-.04, p = .63	**.25, p <.001**	-.06, p = .47
Relationship commitment	-.02, p = .86	-.01, p = .94	-.05, p = .58	-.03, p = .70	.02, p = .84	-.03, p = .73	.02, p = .85	-.02, p = .83
Relationship in-depth exploration	.15, p = .10	**.21, p = .01**	.11, p = .20	**.17, p = .05**	.04, p = .69	-.05, p = .60	**.19, p = .03**	.02, p = .81
Relationship reconsideration of commitments	.02, .81	.00, p = .96	.02, p = .83	-.02, p = .85	**.01, p = .91**	-.05, p = .60	**.05, p = .60**	-.08, p = .37

Note. **Bolded** values indicate $p < .05$

Table 23

Appendix B - Deidentified example of projects [participant identified domains] coded as Intimacy Development

Project	Wave 1	Wave 2	Wave 3	Wave 4
Project 1	Help John with his questions about Christianity *[interpersonal]*	Strengthen Relationship with John *[interpersonal]*	Continue to engage in more religious conversations with John *[intrapersonal]*	Apply for MIA internship *[occupational]*
Project 2	Save money to go to Bali *[leisure]*	Continue to engage in religious conversations with John *[interpersonal]*	Engage more with my brother *[intrapersonal]*	Plan New Zealand road trip *[leisure]*
Project 3	Help Ella with the college process *[interpersonal]*	Call Matthew more frequently *[interpersonal]*	Connect with my roommates more *[intrapersonal]*	Exercise more often *[health/body]*
Project 4	Take time to write more *[intrapersonal]*	Find more time to spend with Georgia *[interpersonal]*	Create times for John and I to experience new things *[intrapersonal]*	Continue connecting with John about his religious beliefs *[interpersonal]*
Project 5	Be more engaging in my friends lives *[interpersonal]*	Contact Wells Fargo about a loan *[maintenance]*	Find a summer job *[occupational]*	Help Jen and Ella see Matthew for someone who is changing *[interpersonal]*
Project 6	Find a second job for the summer *[occupational]*	Pass Finals *[academic]*	Connect with my roommates more *[intrapersonal]*	Audition for more shows *[occupational]*
Project 7	Be in a theatrical project this summer *[occupational]*	Go to Bali *[leisure]*	Go to church at least twice a month *[interpersonal]*	Research summer acting programs *[occupational]*
Project 8	Form deeper relationships at work *[interpersonal]*	Contiue to set long term goal *[occupational]*	Reach out to Georgia more *[intrapersonal]*	Communicate more efficently with my roommates *[interpersonal]*
Project 9	Save money to go to India *[leisure]*	Address cleaning around the house with roommates *[maintenance]*	Eat healthier *[health/body]*	Reach out to every family member on a weekly basis *[interpersonal]*
Project 10	Work out more then 3 times a week *[health/body]*	Pick up more hours at work *[maintenance]*	Stay on top of household chores *[maintenance]*	Pass midterm *[academic]*

Table 24

Appendix B - Deidentified example of projects [participant identified domains] coded a Identity and Intimacy Development

Project	Wave 1	Wave 2	Wave 3	Wave 4
Project 1	Lower my anxiety *[intrapersonal]*	Pass my course *[academic]*	Pass course *[academic]*	Make sure Alec stays happy and healthy *[maintenance]*
Project 2	Try to enjoy my time at home over the summer *[leisure]*	Declare my major *[academic]*	Find a summer internship *[occupational]*	Graduate with a degree in Economics *[academic]*
Project 3	Pack for moving home *[maintenance]*	Stick with an economics major *[academic]*	Get an emotional support dog *[health/body]*	Become proficient in a new language *[academic]*
Project 4	Don't get upset with Lara as easily *[interpersonal]*	Go to lectures *[academic]*	Figure out if I really want a relationship with Andrew or if I just think I do *[interpersonal]*	Pass classes *[academic]*
Project 5	Find a part-time job *[occupational]*	Call my parents more often *[interpersonal]*	Be honest with Lara about disliking her *[interpersonal]*	Become a shift lead at work *[occupational]*
Project 6	Get on a steady diet *[health/body]*	Keep taking my anxiety medfication *[intrapersonal]*	Visit home this summer *[leisure]*	Start going to the gym with my roommates *[health/body]*
Project 7	Lose weight and get healthier *[health/body]*	Graduate at the end of 4 years *[academic]*	Go to office hours every week *[academic]*	Keep my room clean *[intrapersonal]*
Project 8	Exercise more *[health/body]*	Put myself before others more often *[intrapersonal]*	Go to the gym more *[health/body]*	Try to cut Jason some slack *[interpersonal]*
Project 9	Pack for school in the fall *[maintenance]*	Find a set sleeping schedule *[intrapersonal]*	Ask for a raise at my current job *[occupational]*	Find an internship for the summer *[occupational]*
Project 10	Study for the exam *[academic]*	Study more *[academic]*		Eat healthier *[health/body]*

Table 25
Appendix B - Coding Manual for Case Level Coding of Integration Matrices

Code	Name	Description
1	Task Maintenance	Matrix reflects a to-do list of things that need to get done. Matrix shows no self-reflection, no exploration, no growth, or intention. No growth or change are shown over time. Generally these matrices have predominantly academic, occupational, and health/body goals. Consider this code the "neutral code" if anything else is shown beyond this list the person is not given this code. *No growth or change over time.*
2	Committed Identity	Matrix has one or two goals or threads that are present throughout all waves. Matrix reflects commitment to a career, or other identity and is primarily focused on that identity. Matrix shows no self-reflection. Person seems content and consistent with who they are. Growth or change can be shown over time. E.g. individual wants to be a dentist and this goal stays the same, strong religious identity *perhaps with some growth and then rest of projects are "to do list".*
3	Search for Self	Matrix reflects exploration of self or development of self (i.e. striving to be better at being the person one is). Matrix reflects explicit exploration of the self, identity or identities, focus on figuring out or determining who they are or developing parts of the self. Note that exploration of the self primarily within relationships is Intimacy Development. Identity development is not just bettering the self in terms of body/health issues. Matrices usually show self-reflection.

		Matrices generally reflects growth or striving for something or shows growth or change in goals. Due to this goals related to the self/identity development/betterment must appear in two or more waves.
4	Identity and Intimacy Development	Matrix reflects exploration of self or development of self (i.e. striving to be better at being the person one is) as well as growth and development of relationships, intimacy, and connection. Matrix reflects explicit exploration of the self, identity or identities, focus on figuring out or determining who they are or developing parts of the self as well as exploration of relationships and strivings for being better in connecting or relationships. This can be thought of as a code that combines 3 and 5. Matrices usually show self-reflection. Matrices generally reflects growth or striving for something or shows growth or change in goals. Due to this goals related to both self/identity development/betterment *and* relationships/connections/intimacy the code must appear in two or more waves.
5	Intimacy Development	Matrix reflects exploration of relationships or development of connections or intimacy. Matrix reflects explicit exploration of relationships, friendships, family connections or figuring out or striving to be better in relationships. Matrices usually show self-reflection. Matrices generally reflects growth or striving for something or shows growth or change in goals. Due to this goals related to relationships/connections/intimacy code must appear in two or more waves.

Table 26

Appendix C - Cross tabulation of n *within each Contextual Integration trajectory group and each content code.*

	Task Maintenance	Committed Identity	Identity Development	Identity and intimacy	Intimacy Development	Total
Low-Small Decrease	34	9	19	13	39	114
Moderate-Small Increase	4	2	2	8	1	17
High-Moderate Decrease	2	2	2	6	7	19
Total	40	13	23	27	47	

Note. χ^2 (8) = 19.92, p = .01, Cramer's V = .26