

The Structure of Identity Consolidation: Multiple Correlated Constructs or One Superordinate Construct?

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This study examined the structure of identity consolidation and its relationship to positive and negative psychosocial functioning in emerging adulthood. An ethnically diverse sample of 234 university students completed measures of identity consolidation from identity synthesis, identity status, and identity capital perspectives, as well as measures of agency and subjective well-being, depression, anxiety, impulsivity, and tolerance for deviance. Structural equation modeling analyses suggested that a model with identity consolidation cast as separate correlated processes provided a significantly better fit to the data than did a model with identity consolidation cast as a single process with multiple components. Indexes of identity synthesis were most closely related to both positive and negative psychosocial functioning, whereas identity consolidation indexes drawn from identity status and identity capital were related primarily to positive psychosocial functioning. Implications for identity research are discussed.

The study of identity has been ongoing for more than 50 years, ever since Erikson (1950) published his classic book *Childhood and Society*. Erikson posited identity as the interplay between identity synthesis and identity confusion, where successful identity development was understood as the extent to which identity synthesis predominates over identity confusion. Erikson portrayed identity synthesis as underlain by a sense of agency and self-direction, whereas identity confusion reflected a conflicted, haphazard, and fragmented sense of self.

Erikson (1950, 1968) stressed that a healthy and coherent sense of identity was an important prerequisite for functioning well in American society. Although this

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was certainly true during the time of his writings, it is even more so during the first years of the 21st century. As late-modern societies have become increasingly unstructured, the realities of childhood and adolescence have become increasingly decoupled from the realities of adulthood (e.g., education from work, family of origin from family of procreation; Côté, 2000; Côté & Allahaar, 1994; Côté & Levine, 2002). Not coincidentally, the gulf between adolescence and adulthood has widened, creating a new developmental stage during which young people in postindustrial societies must make their own way toward adult commitments. Arnett (2000) referred to this stage as *emerging adulthood*, and he has commented on the exceptionally amorphous nature of this developmental period (Arnett & Taber, 1994). Whereas it was common for young people to address identity issues during adolescence at the time of Erikson's writings, identity issues are now more commonly addressed during the emerging adult years (S. J. Schwartz, Côté, & Arnett, 2005; S. J. Schwartz & Montgomery, 2002). Because of the lack of external guidance and social markers of adulthood in contemporary Western societies (Arnett, 1998; Côté, 2000), developing a sense of identity that can guide the process of self-directed decision making is of paramount importance during the transition to adulthood.

During the time since Erikson's writings, other theorists have introduced models to operationalize and complement Erikson's theory of identity (S. J. Schwartz, 2001). Among the most prominent of these efforts has been Marcia's (1966) identity status model. Marcia extracted from Erikson's work the assumedly independent dimensions of *exploration* and *commitment*, where commitment may be taken as an index of identity consolidation (see Bosma & Kunnen, 2001, for a more extensive treatment of the role of commitment in identity development). Marcia then bifurcated exploration and commitment into "present" and "absent" and crossed the two dimensions to create four identity statuses. The statuses are achievement, moratorium, foreclosure, and diffusion. *Achievement* represents a set of commitments enacted following a period of exploration, and it can be taken as an index of identity consolidation (Côté & Schwartz, 2002; S. J. Schwartz, 2006). *Moratorium* refers to a state of active exploration without current commitments. *Foreclosure* refers to a set of commitments enacted without much prior exploration. *Diffusion* refers to a lack of concern about identity issues, with or without prior identity exploration.

A number of other identity models have been introduced in the past 20 years (see S. J. Schwartz, 2001, for a review). Many of these models include predictors of identity consolidation, such as decision making styles (Berzonsky, 1989), problem-solving competence (Berman, Schwartz, Kurtines, & Berman, 2001), and self-realization (Waterman et al., 2003). However, *identity capital*, which was explicitly introduced as an understanding of identity development in late-modern, postindustrial societies (Côté, 1996), is one of the only newer models that includes both predictors and indexes of identity consolidation. Identity capital draws on

Erikson's contention that a coherent and workable sense of identity is best facilitated by an agentic orientation in which the person engages in purposeful interactions with the social environment (cf. Lerner, Freund, DeStefanis, & Habermas, 2001; S. J. Schwartz, Côté, et al., 2005). Côté (1996, 1997, 2000) argued that a coherent sense of identity can be used as "capital" to negotiate for social resources such as club memberships, jobs, and the like. The identity capital approach holds that each person is responsible for accumulating the identity-related resources necessary to negotiate for the positions and roles that she or he wishes to attain (Côté, 2000). As a result, the approach places a premium on agency and self-direction as a vehicle by which a coherent and workable sense of identity is developed.

THE EMERGENCE OF IDENTITY CONSOLIDATION AS AN INDEX OF IDENTITY IN EMERGING ADULTHOOD

The first 25 years or so of identity research were focused primarily on theory testing. Many studies were conducted to investigate the correlates and discriminant validity of the identity statuses (see Marcia, 1993; Waterman, 1999, for reviews). From the earliest research using the identity status paradigm (Marcia, 1966), there has been an interest in the relationship of identity to positive and negative psychosocial functioning, an interest that has increased over time (S. J. Schwartz, 2005). More recently, some research has been conducted to ascertain the relationships of identity to subjective well-being (Hofer, Kärtner, Chasiotis, Busch, & Kiessling, in press; van Hoof & Raaijmakers, 2002; Waterman, in press), substance use (Bishop, Weisgram, Holleque, Lund, & Wheeler-Anderson, 2005; Jones, Hartmann, Grochowski, & Glider, 1989), behavior problems (Adams et al., 2001; S. J. Schwartz, Pantin, Prado, Sullivan, & Szapocznik, 2005), psychological distress (de Goede, Spruijt, Iedema, & Meeus, 1999), and sexual risk taking (Hernandez & DiClemente, 1992).

However, it should be noted that much of this research on identity and psychosocial functioning was conducted using identity status as the sole index of identity formation. Within the identity status framework, diffusion is clearly the least adaptive status, and achievement is, in modern Western cultural contexts, the most adaptive status (Côté & Schwartz, 2002). However, the placement of moratorium and foreclosure on this continuum is unclear. Moreover, although it yields valuable information about individual differences in identity formation, a number of writers have suggested that identity status is a narrow operationalization of identity development and should not be used alone as the sole index of identity (Côté & Levine, 1988; S. J. Schwartz, 2001). Some writers (e.g., van Hoof, 1999, 2001) have gone as far as to implore researchers to stop using the identity status model altogether (see Waterman, 1999, for a rebuttal).

S. J. Schwartz (2001, 2005) has proposed a middle ground, where indexes drawn from the identity status model are used in combination with indexes from Eriksonian theory and from other understandings of identity (e.g., identity capital). He has proposed the term *identity consolidation* as an umbrella under which a number of variables pertaining to successful identity development might be placed (S. J. Schwartz, 2006). Identity consolidation refers to a synthesized and agentic sense of self that can facilitate effective decision making and can support creating a life course without much external help. Such a construct represents what Côté (2000; Côté & Allahaar, 1994) and Arnett (2000) have proposed as being necessary to navigate the unstructured transition to adulthood. Indexes of identity consolidation would therefore include identity synthesis (from an Eriksonian perspective), identity commitments, the identity achieved status, and a sense of being an adult and of having found a validating community (cf. Bosma & Kunnen, 2001; Côté, 1997; S. J. Schwartz, Côté, et al., 2005).

Identity consolidation, therefore, represents an integration of separate but overlapping approaches to the study of identity. Erikson focused on the coherence and consistency of the identity that one develops; identity status focuses on the extent to which an individual is committed to a set of goals, values, and beliefs; and identity capital focuses on the extent to which one's identity can support negotiation for societal resources. An integrative construct such as identity consolidation has the potential to bring together the strengths of the component approaches while also creating a "whole" that may begin to reflect Erikson's (1950) grand vision for the study of identity—a comprehensive developmental-social approach that would map, predict, and explain the course of identity development and its relationship to psychosocial adjustment and functioning. As has been noted by Côté (1993) and by S. J. Schwartz (2001), realizing Erikson's grand vision has become the purview of the identity research community—suggesting that the development of integrative identity constructs and models should be strongly encouraged.

In theory, identity consolidation provides a standard by which an emerging adult's sense of identity can be evaluated to ascertain its viability in the postindustrial, late-modern world. To the extent that identity consolidation provides a sense of direction and purpose in the absence of external norms or guidance, it should be positively related to agentic functioning and indexes of subjective well-being, and inversely related to psychological distress and problematic behavior (S. J. Schwartz, 2005; S. J. Schwartz, Montgomery, & Briones, 2006). However, a key conceptual and empirical issue remains to be addressed—namely, how to operationalize and measure identity consolidation. Erikson (1950; identity synthesis), Marcia (1966; identity commitment and the achieved status), and Côté (1997; identity capital acquisition) have each introduced variables that can be taken as indicators of identity consolidation. Although the indexes introduced by these three theorists are clearly related to each other (S. J. Schwartz, 2006), they are not perfectly intercorrelated. There is some variability in identity synthesis, for

example, that is not captured by identity achievement or by identity capital acquisition. To the extent that they share variability in common, identity synthesis, identity commitment and achievement, and identity capital might be taken as patterning onto a higher order identity consolidation construct. However, to the extent to which these three views of identity consolidation diverge from one another, they might be taken as competing explanations of the identity consolidation process. Put another way, the question emerges as to whether there is meaningful variability in each of the three views of identity consolidation that is not shared with the others, or whether identity consolidation is best represented by the variability that they share in common. This issue was addressed empirically in this study.

THIS STUDY

This study was designed to evaluate the extent to which identity consolidation might best be represented (a) as three separate but correlated indexes (i.e., identity synthesis, identity status, and identity capital); or (b) as three components patterning onto a single, higher-order latent construct. Although this may be seen as a largely methodological issue, it may have important theoretical implications as well—especially for the relationships of identity consolidation to positive and negative psychosocial functioning. This may be particularly true to the extent that identity synthesis, identity status, and identity capital indexes of identity consolidation are differentially related to measures of psychosocial functioning. A higher order latent variable would impose a single set of relationships to psychosocial functioning measures, and these relationships may be quite different from those involving the separate indicator variables. A number of writers (e.g., Côté, 1996; S. J. Schwartz, 2006) have stressed that identity consolidation is a multidimensional process; a finding that identity consolidation is best represented by a single latent variable might, to some extent, undermine this assumption of multidimensionality. In latent variable approaches, the latent variable represents only the variability shared among the indicators, and unique variance in each indicator is factored out of the model (Keith, 2006).

METHOD

Participants

Participants in this study were 234 students (56 men, 169 women, and 9 unidentified by gender) enrolled in psychology and sociology classes at two culturally diverse, urban universities in the southeastern United States. The mean age of the sample was 20 years ($SD = 3.13$), with 92% of participants between the ages of 18

and 29. In terms of ethnicity, 13% of participants were non-Hispanic White, 33% were non-Hispanic Black, 48% were Hispanic, and 6% were from other ethnic groups. Of Hispanic participants, 26% reported that both of their parents were Cuban, 37% reported that both of their parents were from a Hispanic country other than Cuba, and 37% reported that their parents were born in different countries. The majority of White (77%), Black (75%), and Hispanic (65%) participants were born in the United States. Foreign-born White students were primarily from Eastern Europe; foreign-born Black students were primarily from Haiti and Jamaica; and foreign-born Hispanic students were primarily from Cuba, Nicaragua, Colombia, and Peru.

Measures

The various measures used in this study were designed to be used with different response formats. To provide the cleanest and most consistent comparison across measures, a common response format was adopted. A five-point Likert scale, with response choices ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), was used for all measures in the study. The range of possible scores and the internal consistency estimate for each measure are provided in Table 1.

TABLE 1
Descriptive Statistics for Study Variables

<i>Variable</i>	<i>M</i>	<i>SD</i>	<i>Range</i> ^a	<i>Cronbach's α</i>
Identity consolidation				
EP SI Identity	46.10	6.98	30–60 (12–60)	.83
Ego Identity Scale	41.80	6.64	23–58 (12–60)	.77
EIPQ Commitment	54.28	7.10	38–72 (16–80)	.66
EOM-EIS-II Achievement	53.97	8.25	27–74 (16–80)	.76
Adult Identity Resolution	10.24	2.41	3–15 (3–15)	.63
Community Identity Resolution	11.71	2.79	4–20 (4–20)	.61
Positive psychosocial functioning				
Self-Esteem	83.79	11.97	58–119 (25–125)	.83
Purpose in Life	41.36	6.22	23–58 (12–60)	.72
Internal Locus of Control	17.61	2.90	7–24 (5–25)	.52
Ego Strength	86.86	10.33	61–120 (26–130)	.76
Negative psychosocial functioning				
Depression	51.21	13.18	20–92 (20–100)	.89
Anxiety	41.64	13.10	18–77 (18–90)	.91
Impulsivity	19.51	6.10	8–36 (8–40)	.82
Tolerance for Deviance	14.15	5.01	7–33 (7–35)	.80

Note. EP SI = Erikson Psychosocial Stage Inventory; EIPQ = Ego Identity Status Questionnaire; EOM-EIS-II = Extended Objective Measure of Ego Identity Status II.

^aRange of possible scores appears in parentheses.

Identity consolidation. Given the multidimensionality of identity consolidation (Côté, 2006; Côté & Levine, 1988, 2002; S. J. Schwartz, 2001, 2005, 2006), several measures were used to index this construct. Two measures were selected to represent identity consolidation from an Eriksonian point of view (referred to as identity synthesis), two from identity status, and two from the identity capital model (Côté, 1996, 1997).

Identity synthesis measures was measured using the Erikson Psychosocial Stage Inventory (12 items; Rosenthal, Gurney, & Moore, 1981) and the Ego Identity Scale (12 items; Côté, 1984). Both of these measures contain positively and negatively worded items and consist of items drawn from Erikson's theory of identity. Both these measures assess the extent to which the individual has developed a coherent and internally consistent sense of self. These measures have both been shown to be appropriate for multiethnic samples (S. J. Schwartz, 2006; S. J. Schwartz, Pantin, et al., 2005).

Identity commitment and achievement were assessed using the Ego Identity Status Questionnaire (EIPQ; Balistreri, Busch-Rossnagel, & Geisinger, 1995) and the Extended Objective Measure of Ego Identity Status II (EOM-EIS-II; Bennion & Adams, 1986), respectively. The EIPQ and the EOM-EIS-II are among the most commonly used paper-and-pencil measures of identity status (S. J. Schwartz, 2004). On the EIPQ, the 16-item commitment subscale, summed across content domains, was used in this study. On the EOM-EIS-II, the 16-item achievement subscale, summed across domains, was used in this study. The EIPQ and EOM-EIS-II share six of their eight content domains in common (politics, religion, occupation, friendships, dating, and gender roles). The EIPQ adds personal values and family relationships as additional domains, whereas the EOM-EIS-II adds lifestyle and recreation. The EIPQ and the EOM-EIS-II have both been shown to be appropriate for multiethnic samples (S. J. Schwartz, Adamson, Ferrer-Wreder, Dillon, & Berman, 2006; S. J. Schwartz & Montgomery, 2002).

The two identity capital measures are taken from Côté's (1997) Identity Stage Resolution Index, which is designed to assess the extent to which participants have reached a subjective state of adulthood and of community integration. Both subjective adult status and a sense of community integration are taken as indications that the person has developed a coherent and functional sense of identity (Côté, 1996; Côté & Levine, 2002). The Identity Stage Resolution Index consists of the Adult Identity Resolution Scale (AIRS; 3 items) and the Community Identity Resolution Scale (CIRS; 4 items). The AIRS and CIRS have been shown to be appropriate for multiethnic samples (Côté & Schwartz, 2002; S. J. Schwartz, 2006).

Positive psychosocial functioning. Positive psychosocial functioning was assessed in terms of self-esteem, purpose in life, internal locus of control, and ego strength (resilience). These four indexes not only reflect a sense of subjective well-being (Sheldon et al., 2004), but they also reflect a sense of

self-determination and agency (Côté, 1997, 2002; S. J. Schwartz, Côté, et al., 2005). Although agency can function as an antecedent (S. J. Schwartz, Côté, et al., 2005), a component (Côté & Levine, 2002), or a correlate (Côté & Schwartz, 2002) of identity, agency was used as a correlate of identity in this study. This was done because the purpose of the present study was to examine identity consolidation and its correlates.

Self-esteem was assessed using the Coopersmith Self-Esteem Scale (25 items; Coopersmith, 1981). This scale assesses participants' overall self-worth. Sample items include "I'm a lot of fun to be with" and "I have a low opinion of myself" (reversed). Purpose in life was assessed using the Purpose in Life Scale (12 items; Crumbaugh & Maholick, 1969). This scale assesses participants' sense of life purpose and direction. Sample items include "In life, I have very clear goals and aims for myself." Internal locus of control was measured using Côté's (1997) adaptation of Rotter's (1966) Locus of Control Scale, with a five-point Likert scale used in place of the traditional ipsative format. The Likert scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). This adapted version consists of five items. Sample items include "What happens to me is my own doing." Ego strength was measured using the Ego Strength Scale (26 items; Epstein, 1983). This scale measures the extent to which participants are resilient and persevere in the face of adversity. Sample items include "I have a lot of willpower." These scales have been shown to function equivalently across ethnic groups (S. J. Schwartz, Côté, et al., 2005).

Negative psychosocial functioning. Four scales were used to index negative psychosocial functioning. Following Achenbach's (e.g., Achenbach, Dumenci, & Rescorla, 2002) partitioning of negative behaviors into "internalizing" and "externalizing" problems, two scales were used to assess proclivity toward internalizing problems, and two scales were used to assess proclivity toward externalizing problems. Depression was assessed using the Center for Epidemiologic Studies Depression Scale (CES-D; 20 items; Radloff, 1977), which was designed to assess depressive symptoms in the general population. Anxiety was assessed using the Beck Anxiety Inventory (18 items; Beck, Epstein, Brown, & Steer, 1988). Both of these measures contain items specific to the week prior to assessment. Sample items include "I have felt down and unhappy this week" (CES-D) and "I have been worrying a lot this week" (Beck Anxiety Inventory).

Proclivity toward externalizing problems was measured in terms of impulsivity and tolerance for deviance. Both of these indexes have been associated with drug use and delinquent behavior (Ryb, Dischinger, Kufera, & Read, 2006; Wills & Cleary, 1996). Impulsivity was measured using eight items taken from Brook et al. (2005). Sample items include "I often say and do things without thinking." Tolerance for deviance was measured using seven items developed in line with Donovan, Jessor, and Costa (1999). These items were worded in the form of "It is wrong to ...," with a different negative behavior (e.g., smoking marijuana, driving while

intoxicated, getting into fist fights) listed for each item. Responses were reverse scored so that higher scores indicated greater tolerance for deviance.

RESULTS

Descriptive Statistics and Bivariate Correlations

Descriptive statistics for all study variables are displayed in Table 1, and bivariate correlations are displayed in Table 2. As can be gathered from Table 1, study variables were normally distributed; Kolmogorov–Smirnov Z tests for normality produced nonsignificant results (where a nonsignificant result indicates a normal distribution) for all variables.¹ To ascertain whether ethnicity and gender would need to be controlled, I compared all of the bivariate correlations in Table 1 across ethnicity and across gender. I used a structural equation modeling procedure, which is more powerful than the traditional z test for independent correlation coefficients (M. W.-L. Cheung & Chan, 2004) to make these comparisons. Ten of the 91 correlations estimated (11%) differed significantly by ethnicity, and 8 of these 10 correlation differences involved the EOM-EIS-II achievement scale (the other two involved ego strength). Only 2 of the 91 correlations estimated (2%) differed significantly by gender. Because these percentages did not depart considerably from what would be expected by chance, no controls were implemented for ethnicity or gender.

Estimation of Competing Models

Next, structural equation models were estimated to compare the fit of (a) a model with identity synthesis, identity status, and identity capital indexes posited as separate but correlated indicators of identity consolidation to (b) a model with identity synthesis, identity status, and identity capital posited as components of a higher order identity consolidation factor. In each of these models, first-order latent variables were created to represent identity synthesis, identity status (commitment and achievement), and identity capital. The Ego Identity Scale and the Erikson Psychosocial Stage Inventory were attached to the identity synthesis latent variable; the EIPQ commitment scale and the EOM-EIS-II achievement scale were attached to the identity status latent variable; and the AIRS and CIRS were attached to the identity capital latent variable. Structural equation modeling with latent variables is particularly useful because it controls for measurement error and permits examination of relationships among “true” scores, where each latent variable is taken to represent the true construct that the indicators are intended to measure

¹Kolmogorov–Smirnov Z values are available from the author upon request.

TABLE 2
Correlations Among Observed Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Identity consolidation														
1. EPSP Identity	—	.54***	.48***	.35***	.38***	.28***	.51***	.57***	.33***	.42***	-.50***	-.43***	-.27**	-.24***
2. Ego Identity Scale		—	.40***	.34***	.26***	.24***	.52***	.60***	.34***	.42***	-.50***	-.41***	-.32***	-.24***
3. EIPQ Commitment			—	.46***	.43***	.31***	.38***	.54***	.28***	.30***	-.26***	-.21**	-.15*	-.27***
4. EOM-EIS-II Achievement				—	.32***	.30***	.23***	.39***	.34***	.13*	-.09	-.04	.02	-.17*
5. Adult Identity Resolution					—	.41***	.36***	.44***	.28***	.18**	-.12	-.03	-.06	-.01
6. Community Identity Resolution						—	.25***	.34***	.25***	.03	-.13	-.11	-.02	-.03
Positive psychosocial functioning														
7. Self-Esteem							—	.60***	.17*	.47***	-.49***	-.44***	-.28***	-.10
8. Purpose in Life								—	.43***	.49***	-.48***	-.36***	-.23***	-.30***
9. Internal Locus of Control									—	.21**	-.18**	-.14*	-.05	-.24***
10. Ego Strength										—	-.44***	-.49***	-.53***	-.20**
Negative psychosocial functioning														
11. Depression											—	.75***	.36***	.14*
12. Anxiety												—	.47***	.13
13. Impulsivity													—	.32***
14. Tolerance for Deviance														—

Note. EPSP = Erikson Psychosocial Stage Inventory; EIPQ = Ego Identity Status Questionnaire; EOM-EIS-II = Extended Objective Measure of Ego Identity Status II.

* $p < .05$. ** $p < .01$. *** $p < .001$.

(Keith, 2006; Kline, 2006; Quintana & Maxwell, 1999). When a latent variable is constructed using multiple indicators, the latent variable represents the variability shared among the indicators. Variability unique to each indicator is removed from the model.

The fit of the tested models to the data was evaluated using standard structural equation modeling indexes: the chi-square statistic, which compares the variance–covariance matrix implied by the model to the variance–covariance matrix observed in the data; the comparative fit index (CFI), which compares the specified model to a null model with no paths or latent variables; and the root mean square error of approximation (RMSEA), which compares the variance–covariance matrix implied by the model to the variance–covariance matrix observed in the data and is adjusted for sample size and model complexity. Good fit is represented by a nonsignificant chi-square value, a CFI of .95 or above, and a RMSEA of .08 or below (Kline, 2006; Quintana & Maxwell, 1999). We also used the standardized root mean square residual (SRMR), which is similar to the RMSEA and for which values of .06 or below are considered acceptable. Because the chi-square index is not adjusted for sample size or model complexity, in more complex models, a significant chi-square may not be problematic as long as the CFI and RMSEA indicate adequate fit (Keith, 2006).

Separate but correlated indicators model. The model with identity synthesis, identity status, and identity capital indexes posited as separate but correlated indicators of identity consolidation provided an excellent fit to the data, $\chi^2(6) = 3.18, p = .79, CFI > .99, RMSEA < .001$ (see Figure 1). The three first-order latent identity consolidation variables were extremely highly correlated with one another, with a mean correlation of .73 (range = .63–.80). In contrast, the average correlation among the observed identity consolidation indicators was .37 (range = .25–.54). It is therefore apparent that failure to correct for measurement error is likely to considerably attenuate the correlations among indexes of identity consolidation.

Second-order latent factor model. The model with the identity synthesis, identity status, and identity capital constructs patterning onto a second-order latent factor also provided an excellent fit to the data, $\chi^2(6) = 3.18, p = .79, CFI > .99, RMSEA < .001$ (see Figure 2). The fit of this model to the data was identical to that of the first model tested because the second-order latent factor was posited as accounting for the correlations among the first-order constructs, and as a result the variance–covariance matrix being estimated was essentially the same. In this model, factor pattern coefficients for the first-order constructs on the second-order latent factor ranged from .77 to .98, with a mean of .90.

Because the two models tested are statistically identical, they cannot be compared using model fit statistics. Comparisons between the two models would

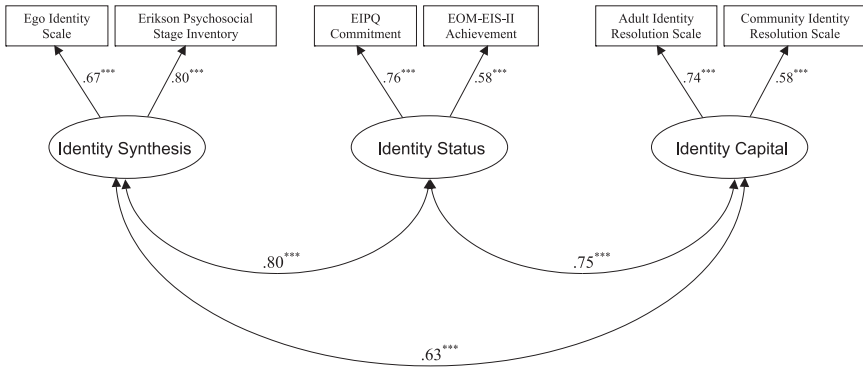


FIGURE 1 Separate correlated indicators model.

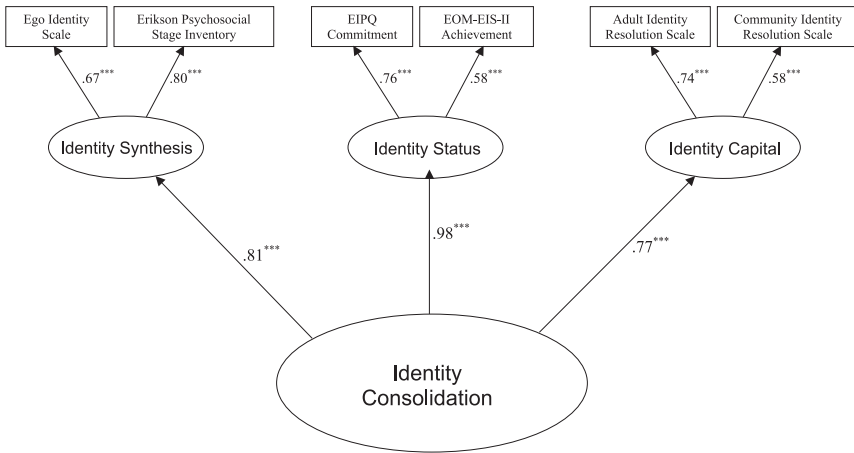


FIGURE 2 Components of higher order factor model.

therefore need to be made on theoretical grounds and in terms of practical usefulness (Keith, 2006). In theoretical terms, it is important to consider that identity development and consolidation is a multidimensional process (Côté & Levine, 2002; S. J. Schwartz, 2001; S. J. Schwartz, Montgomery, et al., 2006) and that reducing it to a single construct may obscure some of the differences between the various operationalizations of identity. As a result, theoretical preference would be assigned to the model in which identity consolidation is represented as a set of separate but intercorrelated constructs.

In terms of practical usefulness, I examined the two potential identity consolidation models in terms of their relationships to indexes of psychosocial function-

ing. The first step in this process was to decide on a factor solution for psychosocial functioning. To accomplish this, I estimated three models for positive and negative psychosocial functioning: (a) a model in which the positive and negative psychosocial functioning indicators were attached to a single latent variable, (b) a model in which positive and negative psychosocial functioning indicators were attached to separate latent variables, and (c) a model in which positive psychosocial functioning was posited as a single latent variable and in which negative psychosocial functioning was posited as separate latent variables for internalizing and externalizing problems. The Bayesian Information Criterion (BIC; G. Schwartz, 1978) was used to compare the fit of these models to the data. Model C provided a better fit to the data than did either Model A, $\Delta\text{BIC} = 32.23$, or Model B, $\Delta\text{BIC} = 5.45$. The model of psychosocial functioning that I retained provided an adequate fit to the data, $\chi^2(14) = 49.67$, $p < .001$, CFI = .95; RMSEA = .105, SRMR = .055. Although the RMSEA was elevated, the SRMR—which also assesses the extent to which the model deviates from the data—was in the acceptable range (i.e., SRMR < .06).

This model of psychosocial functioning is consistent with extant literature. The indicators of positive psychological functioning are both theoretically (Côté & Levine, 2002) and empirically (Côté, 1997) related, and they have been shown to pattern strongly onto a single latent factor (S. J. Schwartz, Côté, et al., 2005). Following Achenbach et al. (2002), the indicators of negative psychosocial functioning can be grouped into “internalizing” (anxiety and depression) and “externalizing” (impulsivity and tolerance for deviance) clusters. The latent variables representing psychosocial functioning were therefore (a) agency and subjective well-being, (b) internalizing, and (c) externalizing.

Next, I examined the interrelationships between the identity consolidation constructs and these dimensions of psychosocial functioning. In the first identity-adjustment model, correlations were estimated between each of the identity consolidation factors and each of the psychosocial functioning factors.² This model provided a fair fit to the data, $\chi^2(62) = 156.78$, $p < .001$, CFI = .91, RMSEA = .085. However, adding covariances between the error terms (a) for self-esteem and ego strength (which are both attached to the positive psychosocial functioning construct) and (b) for ego strength and impulsivity (which are conceptual opposites) resulted in improved model fit, $\chi^2(60) = 115.29$, $p < .001$, CFI = .95, RMSEA = .066. Correlations between the latent identity consolidation and psychosocial functioning factors are displayed in Table 3. The identity synthesis latent variable was almost perfectly correlated ($r = .97$) with positive psychosocial functioning

²Although it could be argued that estimating regression models and calculating R^2 values might be more valuable than simply estimating bivariate correlations, the high intercorrelations among the three identity consolidation indexes in the first model would have created multicollinearity problems and would have precluded proper interpretation of regression coefficients and R^2 values.

TABLE 3
Correlations Between Latent Identity Consolidation and Psychosocial
Functioning Variables

Variable	Identity Consolidation Measure		
	Identity Synthesis	Identity Status	Identity Capital
Agency/subjective well-being	.97***	.80***	.69***
Internalizing	-.74***	-.35***	-.19*
Externalizing	-.61***	-.38***	-.05

* $p < .05$. *** $p < .001$.

and was strongly and negatively correlated with both internalizing and externalizing. The identity status index of identity consolidation was strongly correlated with positive psychosocial functioning and was modestly negatively related to internalizing and externalizing. The identity capital index of identity consolidation was strongly correlated with positive psychosocial functioning but was weakly related to internalizing and not related to externalizing.

A second identity-adjustment model was then estimated, with the second-order identity consolidation latent variable posited as correlating with the latent indexes of psychosocial functioning. Even with the same correlated error terms that were included in the previous model, this model provided only a fair fit to the data, $\chi^2(67) = 165.48$, $p < .001$, CFI = .91, RMSEA = .083. In this model, identity consolidation was strongly related to all three psychosocial functioning indexes: positive psychosocial functioning ($r = .97$, $p < .001$); internalizing ($r = -.62$, $p < .001$); and externalizing ($r = -.52$, $p < .001$).

The poorer fit of this model to the data may have been due, in part, to the nonsignificant correlation between identity capital and externalizing. To examine this possibility, I dropped externalizing and reestimated the model. Model fit remained fair when externalizing was dropped, $\chi^2(48) = 137.51$, $p < .001$, CFI = .92, RMSEA = .090. The SRMR value was also elevated (.072), indicating that the model deviated considerably from the data.

To compare the fit of these two models to the data, I used three indexes commonly utilized to compare competing models: the chi-square difference ($\Delta\chi^2$), the difference in CFI values, and the difference in nonnormed fit index (NNFI) values. Although the NNFI is less commonly used than the CFI to evaluate the fit of a single model to the data, the Δ NNFI index is especially sensitive to differences in fit between models (Little, 1997). For the null hypothesis of equivalent models to be statistically rejected, the $\Delta\chi^2$ value should be significant at $p < .05$ (Byrne, 2001), the Δ CFI value should be greater than .01 (G. W. Cheung & Rensvold, 2002), and the Δ NNFI value should be greater than .02 (Vandenberg & Lance, 2000). When I

compared the fit of the two identity-adjustment models, the model with identity consolidation represented as three correlated factors provided a significantly better fit, $\Delta\chi^2(7) = 50.19, p < .001, \Delta CFI = .04, \Delta NFI = .05$. I examined the reliability of this model by (a) randomly splitting the sample in half using the random case selection procedure in SPSS, and (b) conducting an invariance test on the model fit across these randomly selected half-samples. It should be noted that splitting the current sample in half resulted in two fairly small half-samples, and that small sample sizes may cause instability in model parameters (Bentler & Yuan, 1999; Nevitt & Hancock, 2004) and may increase the likelihood that the null hypothesis of invariance will be rejected. Nonetheless, this invariance test indicated that the model was reliable across randomly selected halves of the sample, $\Delta\chi^2(14) = 26.80, p < .03, \Delta CFI = .011, \Delta NFI = .009$. As a result, I concluded that, in relation to indexes of positive and negative psychosocial functioning, conceptualizing identity consolidation as separate but correlated factors best represents the data. The unique variability in the identity synthesis, identity status, and identity capital indexes of identity consolidation clearly makes a meaningful contribution to positive and negative psychosocial functioning—a contribution that is lost when only variability shared among the three sets of indexes is considered.

DISCUSSION

The study was designed to examine the structure of identity consolidation in emerging adulthood. This is an important issue given that identity consolidation is a multidimensional construct consisting of indexes drawn from three different theoretical perspectives (Erikson, identity status, and identity capital). The extent to which these three understandings are complementary versus competing may therefore have important implications for the study of identity consolidation (and for the study of identity more generally). Identity consolidation may be a particularly appropriate index of identity development in emerging adulthood (Côté, 2000; S. J. Schwartz, 2006), where an agentic and coherent sense of identity is important for “getting ahead” in an unstructured Western society (cf. Côté & Levine, 2002; S. J. Schwartz, Côté, et al., 2005).

Models were estimating identity consolidation (a) as multiple correlated processes, and (b) as multiple dimensions of a single, higher order process. When identity consolidation was examined alone, the two models fit the data equivalently. However, when indexes of positive and negative psychosocial functioning were also included, the model with identity consolidation posited as separate correlated constructs appeared to provide the best fit to the data. What this suggests is that although identity synthesis, identity commitment and achievement, and identity capital overlap considerably, there is variability in each index that is not shared with the others and that may relate differentially to indexes of psychosocial func-

tioning. This unshared variability, and the extent to which preserving it provides a better representation of the data, suggests that although identity consolidation is a useful construct that incorporates elements from various approaches to identity, it should not be used to replace or substitute for these existing approaches. In other words, there is a whole that is greater than the sum of its parts—but the parts should not be ignored when considering the whole.

Although all three identity consolidation indexes relate strongly to agency and subjective well-being, only identity synthesis related strongly to negative psychosocial functioning. The identity status index related modestly to negative psychosocial functioning, and the identity capital index did not relate to negative psychosocial functioning. What this suggests is that consistent with Erikson's writing, a coherent and synthesized sense of self is a necessary prerequisite *both* to functioning well in the world *and* to avoiding psychological distress and deviance. Neo-Eriksonian models of identity, such as identity status and identity capital, have succeeded in capturing the relationship of identity to positive psychological functioning, but they have been somewhat less successful in capturing the relationship of identity to negative psychosocial functioning.

The strong positive relationships of all three indexes of identity consolidation to agency and subjective well-being support the contention that agency and identity are closely interrelated (Côté & Levine, 2002; Côté & Schwartz, 2002; S. J. Schwartz, Côté, et al., 2005). In particular, the near-perfect correlation between identity synthesis and agency/subjective well-being supports the contention that in Western cultural contexts, a consolidated sense of identity is underlain by agency (cf. Côté, 2000; Côté & Allahar, 1994).

It is important, however, to consider the counterargument that the especially strong relationships of identity synthesis to positive and negative psychosocial functioning may be due, in part, to item overlap. For example, items on the Erikson Psychosocial Stage Inventory identity subscale (e.g., "I know what kind of person I am" and "I feel mixed up") appear similar to items assessing self-esteem (e.g., "People usually follow my ideas") and depression (e.g., "I felt sad this week"). However, I argue that this item overlap is face-valid and reflects the contention that identity is irrevocably intertwined with agency, well-being, and distress. If this is indeed the case, then there may not be a way (and that would not be appropriate) to measure identity and psychosocial functioning without this kind of conceptual and empirical overlap.

On a methodological note, the intercorrelations (a) among observed indicators of identity consolidation, and (b) among latent variables representing identity synthesis, identity status, and identity capital differed to a striking extent. The average intercorrelation among the observed indicators was .37, accounting for approximately 14% shared variability. The average intercorrelation among the latent variables was .73, accounting for approximately 53% shared variability. Correcting for measurement error in the indicators therefore causes the shared variability among

indexes of identity consolidation to increase by a factor of 4. This finding is consistent with S. J. Schwartz, Adamson, et al. (2006), who found that analyses of identity measures at the latent level of analysis may be more accurate than analyses conducted using observed indicators of identity processes. The internal consistency reliability of a set of scores sets an upper limit on the extent to which these scores can correlate with scores on another construct (Streiner, 2003). Given the fairly low internal reliability coefficients that tend to characterize identity measures (particularly measures of identity status), then, it is important to correct for unreliability when estimating relationships among indexes of identity or between identity and other constructs (e.g., Dunkel, 2005). This also means gathering samples large enough to utilize latent variable approaches, which generally require at least 5 to 10 participants per parameter estimated (where each path coefficient, mean, variance, or covariance estimated in the model represents a parameter; Kline, 2006; Quintana & Maxwell, 1999).

The Future of Identity Consolidation: The Need to Develop Measures of This Construct

In this study, I administered six identity measures and used scores on these measures to create indexes of identity consolidation. These six measures consisted of 63 items. This places a considerable amount of burden on researchers seeking to utilize the identity consolidation construct in their research, but who do not wish to (or cannot) add 63 items to their instrument battery. What is needed, then, is the development of a measure of brief to moderate length that assesses the various elements of identity consolidation. Such a measure would need to consist of items assessing identity synthesis, identity commitments, the identity achieved status, and identity capital. One important issue that would arise in the creation of such a measure would be that identity synthesis and identity capital are generally measured as global constructs, whereas identity commitment and status are measured within specific content domains. Although the issue of globality versus domain-specificity of identity has been debated in the identity literature (e.g., Goossens, 2001; Pastorino, Dunham, Kidwell, Bacho, & Lamborn, 1997), it would be most efficient to consistently measure each of the identity consolidation components either at the overall level or within specific content domains. From a pragmatic perspective, if the goal is to develop a brief measure of identity consolidation that can be incorporated into larger instrument batteries without creating undue participant burden, then assessing identity synthesis, identity commitment and achievement, and identity capital at the overall level would require the smallest number of items than would assessing each component within multiple domains.

In light of these findings, it is important that any measure of identity consolidation generate a factor structure whereby items assessing identity synthesis, identity status, and identity capital pattern onto separate but correlated factors. This means

that, using an oblique rotation (where factors are allowed to correlate with one another), factor-analytic procedure should allow for extracting factors corresponding to identity synthesis, identity status, and identity capital approaches to identity consolidation. Although these factors should be correlated, indicating that they can be included under the general heading of identity consolidation, they should not be statistically redundant with one another.

Using measures developed following these guidelines, it will be possible for future research to track the trajectory of identity consolidation over time, to examine the relationship of identity consolidation to other developmental and social processes, and to examine antecedents and consequences of identity consolidation. Identity consolidation may provide a single set of indexes that can be used to represent the identity construct, rather than requiring researchers to choose from among the multiple operationalizations that have been introduced into the identity literature (cf. S. J. Schwartz, 2001). As Côté (2006) observed, a shared understanding of what identity is and how it functions may be necessary to advance the identity construct theoretically and empirically. It is hoped that identity consolidation can serve as a component of such a shared understanding.

Limitations

These results should be interpreted in light of some important limitations. First, although the overall sample size was adequate for estimating the structural models used in the study, the sample sizes within each ethnic group were too small to estimate each model across ethnic groups. Although only a small percentage of bivariate correlations differed significantly by ethnicity, examining differences in bivariate correlations does not substitute for ascertaining cross-ethnic consistency of a structural model as a whole. Ascertaining cross-ethnic consistency in identity processes and their relationships to comparison variables is an important research direction (S. J. Schwartz, 2005; S. J. Schwartz, Côté, et al., 2005) and can help to specify more clearly the role of ethnicity in identity development (cf. Sneed, Schwartz, & Cross, 2006). It is important for future research to gather large enough samples from each ethnic group targeted to permit comparisons of the structure and correlates of identity consolidation across groups.

Second, the small number of men in the sample may be problematic. Although gender differences in identity indexes tend to be fairly small (S. J. Schwartz, Côté, et al., 2005; S. J. Schwartz & Montgomery, 2002), they do exist. Moreover, gender differences have been found in many of the psychosocial functioning measures used in this study, including depression (Sigmon et al., 2005) and anxiety (Landman-Peeters et al., 2005). As a result, it is important to include enough men and women in research samples so that gender differences in study constructs can be reliably examined, and so that models can be estimated separately by gender.

Third, the use of a university student sample may introduce generalizability problems. Emerging adults who do not attend university, sometimes referred to as the “forgotten half” (Halperin, 2001), may differ from university students on a number of socioeconomic, emotional, and social variables. As a result, although a university sample may be useful in exploring the structure of identity consolidation and its relationship to comparison variables, a truly authoritative statement on these issues would need to be formulated using a representative sample of emerging adults.

Despite these limitations, this study has yielded potentially important information about the structure of identity consolidation. The results support the consideration of identity consolidation as a multidimensional process (cf. Côté, 1996; Côté & Levine, 2002; S. J. Schwartz, 2001, 2005). Identity synthesis, identity commitment and achievement, and identity capital may each provide somewhat different vantage points on identity consolidation, especially as it relates to indexes of positive and negative psychosocial functioning. As discussed earlier, it is therefore important to utilize measures that tap into identity synthesis, identity status, and identity capital when measuring identity consolidation in an empirical study. It is hoped that these results will inspire more research on the structure and correlates of identity consolidation.

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