

## Measuring Identity From an Eriksonian Perspective: Two Sides of the Same Coin?

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In this article, we report the results of 3 studies evaluating the psychometric properties of scores generated using the Erikson Psychosocial Stage Inventory (EPSI; Rosenthal, Gurney, & Moore, 1981) with emerging adults. In Study 1, a hybrid bifactor solution, consisting of an overall identity factor as well as of “method effects” factors for identity synthesis and identity confusion, provided a better fit to the data than did either one or two-factor solutions. This bifactor solution was largely invariant across gender and across Whites, Blacks, and Hispanics. In Study 2, the overall identity, identity synthesis, and identity confusion scores were shown to possess convergent validity with another Eriksonian measure and with measures of identity status. In Study 3, the EPSI subscale scores were shown to possess construct validity vis-à-vis self-esteem, purpose in life, internal locus of control, ego strength, anxiety, and depression. We discuss implications for the measurement of identity.

Identity has been the subject of theoretical and empirical analysis ever since Erikson’s (1950) seminal book *Childhood and Society*. As conceptualized by Erikson (1950), personal<sup>1</sup> identity represents the amount of self-knowledge, synthesis, and consistency that a person possesses over time and across situations. For example, in Western cultural contexts, it is important to “be the same person” at home, at work or school, and with friends (Cross, Gore, & Morris, 2003; Suh, 2002). The extent to which the various aspects of one’s identity fit together—known as *identity synthesis* (Erikson, 1968)—is assumed to strongly predict psychosocial functioning in areas such as self-worth, depression, and relationships. On the other hand, *identity confusion* represents a sense of feeling “mixed up,” that is, being unable to enact and maintain lasting commitments to life alternatives and lacking a clear sense of purpose and direction. Erikson (1950, 1968) had proceeded from the assumption that identity synthesis and identity confusion represent opposing ends of a single continuum. In other words, increases in identity synthesis are assumed to be accompanied by equivalent and opposing decreases in identity confusion and vice versa.

A number of empirical operationalizations of Erikson’s work have been introduced, the most enduring of which has been the identity status model (Marcia, 1966). Marcia (1966) extracted from Erikson’s (1950, 1968) work the dimensions of exploration and commitment. *Exploration* refers to sorting through potential identity alternatives, and *commitment* refers to deciding on and adhering to a specific set of goals, values, and beliefs. From Marcia’s (1966) viewpoint, someone character-

ized by identity synthesis would be expected to have explored and committed to identity alternatives and would be placed into the *identity achieved* status. Conversely, someone characterized by identity confusion would be expected to be uncommitted and to have undergone little, if any, systematic identity exploration. Such a person would be placed into the *identity diffused* status. Marcia (1966) also included two intermediate statuses—*foreclosure* (commitments without prior exploration) and *moratorium* (active identity exploration without commitments).

The vast majority of neo-Eriksonian identity research has relied on the identity status model (Schwartz, 2001, 2005), with comparatively few studies having attempted to operationalize Erikson’s (1950, 1968) identity dimension directly. This may be because Erikson discussed identity in figurative and clinical terms, used a number of case examples, and spoke in highly abstract language. As a result, it may be difficult to extract clear operationalizations from his work (Côté, 1993). As noted earlier, Erikson’s theory and the identity status model overlap in terms of diffusion and achievement (Côté & Schwartz, 2002), whereas the moratorium and foreclosed statuses do not map neatly onto Erikson’s synthesis-confusion dimension. Although moratorium has been conceptualized as the “route” to achievement, it has been found to be more similar to diffusion in terms of identity confusion and psychological distress (Kidwell, Dunham, Bacho, Pastorino, & Portes, 1995). Foreclosure appears to index something entirely separate from Erikson’s model, as it is not clear whether commitments enacted without exploration represent identity synthesis, identity confusion, or neither. As a result, it may be important to operationalize and measure identity directly from an Eriksonian perspective as well as using measures of identity status. Such work would allow for an empirical comparison of Eriksonian and identity status approaches to identity as well as for attempts to extract higher order identity consolidation and confusion constructs that draw on both Erikson’s and Marcia’s (1966) work (e.g., Schwartz, 2007).

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<sup>1</sup>Although multiple dimensions of identity have been discussed, for purposes of clarity and brevity, the term *identity* is used here to refer to personal identity.

A number of years after introducing the identity status model, Marcia (2002) began to explore the possibility of operationalizing some of Erikson's (1950, 1968) other stages (e.g., intimacy, generativity, integrity) for empirical research. As part of this effort, Marcia (2002) recast Erikson's identity stage as identity synthesis with identity confusion (whereas Erikson had used the term *versus*). This recasting carried the assumption that some degree of both synthesis and confusion would be required for healthy identity development. Although a high degree of coherence in one's sense of self is clearly adaptive, the possibility of continuing identity development is contingent on some "empty space" within one's self-knowledge—that is, some space that remains to be filled in (cf. Luyckx, Goossens, & Soenens, 2006). The assumption that identity synthesis and confusion can co-exist to some extent implies that they are not perfect opposites and that a one-dimensional understanding of identity may not be accurate. A two-dimensional model of identity, with synthesis and confusion as separate factors, requires a certain degree of independence between these two dimensions. It is not entirely clear what the factor structure of identity would look like from an Eriksonian perspective—and as a result, this remains an empirical question.

The structure of identity is also important with regard to its relationship to indexes of psychosocial functioning. The value of identity as a social-psychological construct lies in its relevance for healthy and maladaptive functioning (Schwartz, 2005). That is, a coherent sense of identity is valuable only inasmuch as it is associated with adaptive mental health outcomes such as self-esteem, resilience, and life purpose. Similarly, identity confusion is to be avoided only inasmuch as it is associated with maladaptive mental health outcomes such as anxiety and depression. Relevance to mental health and behavioral outcomes was one of the primary emphases within Erikson's (1950, 1968) writings, and it must be the benchmark by which identity is evaluated empirically.

#### MEASUREMENT OF IDENTITY

Researchers have developed a number of measurement instruments to index personal identity development. Perhaps the most popular of these are the Extended Objective Measure of Ego Identity Status (EOM-EIS-II; Bennion & Adams, 1986) and the Ego Identity Process Questionnaire (EIPQ; Balistreri, Busch-Rossnagel, & Geisinger, 1995), both of which are grounded in Marcia's (1966) identity status model. Eriksonian measures have been much less widely used; perhaps the most commonly used is the Erikson Psychosocial Stage Inventory (EPSI; Rosenthal, Gurney, & Moore, 1981). The EPSI contains subscales assessing several of Erikson's (1950, 1968) stages including identity. The Identity subscale was designed to yield a single set of scores, with the assumption that these scores would reflect identity synthesis and the absence of identity confusion. However, whereas in-depth psychometric evaluations have been conducted on the EIPQ (Schwartz & Montgomery, 2002) and the EOM-EIS-II (Schwartz, Adamson, Ferrer-Wreder, Dillon, & Berman, 2006) to support the hypothesized factor structures of scores generated by these instruments, this has not yet been examined with the EPSI.

Although the structure of scores from the EPSI may appear to be solely a methodological issue, it carries important theoretical implications as well. To the extent to which "identity synthesis with identity confusion" is the most accurate interpretation of

Erikson's (1950, 1968) identity stage, a two-factor solution for the EPSI (with Synthesis as the first factor and Confusion as the second factor) should provide a significantly better fit to the data than a one-factor solution with Synthesis and Confusion cast as polar opposites. Moreover, if identity synthesis and confusion are largely opposing but still possess some unshared variability vis-à-vis one another, a hybrid solution—representing a mixture of one- and two-factor models (cf. Quilty, Oakman, & Risko, 2006)—may fit the data better than either the one- or two-factor models. Further, to the extent to which Erikson's theory and Marcia's (1966) identity status theory converge (see Waterman, 1999, for a further discussion), significant correlations should emerge between scores on the EPSI and on the identity status subscales. Provided that they are strong, these correlations may be indicative of higher order identity consolidation and confusion constructs that may subsume both Eriksonian and identity status indexes (cf. Schwartz, 2007). Measuring such constructs requires a reasonably valid and reliable factor structure for the EPSI.

Another important issue in the measurement of identity constructs is the appropriateness of identity measures for diverse populations. Until recently, the vast majority of identity research had been conducted with largely White samples (Sneed, Schwartz, & Cross, 2006). However, as the population of the United States, and of other Western countries, becomes more ethnically and culturally diverse, it has become imperative for identity research to include participants from various ethnic groups. Although some identity status studies have been conducted with ethnically diverse samples (Hall & Brassard, 2008; Streitmatter, 1988), this has not yet been done with Eriksonian identity measures.

Provided that EPSI scores correlate with exploration, commitment, and identity status in theoretically consistent ways and provided that these correlations are consistent across gender and ethnicity, the EPSI can be considered to possess adequate criterion validity. Moreover, to the extent to which scores on the EPSI correlate with measures of psychosocial functioning (e.g., self-esteem, anxiety, depression) in theoretically consistent ways across gender and ethnicity, the measure can be assumed to possess adequate construct validity.

In this article, we report the results of three studies using completely separate and independent samples. In all three studies, we used ethnically diverse samples—which, as stated earlier, represents an important need (and advance) in identity research. In Study 1, we examined the factor structure of the EPSI, comparing a one-factor solution, a two-factor solution, and a hybrid "bifactor" solution that posits one primary factor with two lower order "method" factors included to account for the presence of positively and negatively worded items. Given that identity synthesis and identity confusion are posited as largely opposing, with some degree of independence between them, the bifactor solution was hypothesized to provide the best fit to the data. The bifactor solution provides both an overall identity score and separate scores for identity synthesis and identity confusion (cf. Reise, Morizot, & Hays, 2007). A similar procedure has been used to address method effects resulting from negatively worded items in measures of self-esteem (Quilty et al., 2006). There is evidence that a bifactor solution provides a better fit to the data than does a second-order solution where the larger second-order factor relates to the items only through the first-order method factors (Chen, West, & Sousa, 2006).

In Study 2, we examined the convergent validity of the EPSI subscales in relation to two other Eriksonian measures and to measures of exploration, commitment, and identity status. We hypothesized that the EPSI would converge well with other Eriksonian measures, that identity synthesis would relate most closely to the achieved status, and that identity confusion would relate most closely to the diffused status. Provided that the bifactor solution were to be retained, we would hypothesize that the second-order “total identity” factor would represent Erikson’s (1950, 1968) overall identity dimension and would relate positively to the achieved status and negatively to the diffused status.

In Study 3, we examined the relationships of the empirically derived EPSI subscales (extracted in Study 1) to measures of adaptive and maladaptive psychosocial functioning. For Study 3, we selected measures that would appropriately index adaptive (self-esteem, purpose in life, internal locus of control, and ego strength) and maladaptive (anxiety and depression) psychosocial functioning in emerging adulthood. Well-being and distress represent important positive and negative aspects of adjustment (Keyes, 2005). Emerging adulthood, which bridges adolescence and full adulthood, is critical as a time in which individuals must “find their own way” in many Western cultural contexts (Arnett, 2000). Self-esteem, purpose in life, internal locus of control, and ego strength represent both a sense of well-being and a sense of self-direction that is essential for “getting ahead” in the United States and other Western societies (Côté, 2002). Anxiety and depression, on the other hand, represent aspects of maladaptive functioning that can undermine progress toward gainful employment, committed partnership, parenthood, and other adult responsibilities (Schulenberg & Zarrett, 2006). We hypothesized that both the overall identity score and identity synthesis would relate positively to adaptive psychosocial functioning and negatively to maladaptive psychosocial functioning. We hypothesized that the converse would be true of identity confusion. We conducted all analyses using Mplus 5.0 (Muthén & Muthén, 2007) using maximum likelihood estimation.

## STUDY 1

### Method

**Sample and procedures.** The sample for Study 1 consisted of 337 students (95 men, 241 women, 1 unidentified by gender;  $M$  age = 20.15 years,  $SD$  = 2.75) enrolled in a large, urban, public university in Miami. In terms of ethnicity, 57 participants identified as non-Hispanic White, 82 as non-Hispanic Black, and 198 as Hispanic. The majority of White (96%), Black (72%), and Hispanic (70%) participants were born in the United States. Foreign-born Blacks were primarily from Haiti and Jamaica, and foreign-born Hispanics were primarily from Colombia, Cuba, Nicaragua, and Peru. Of participants reporting annual family income (87% of the sample), 16% reported less than \$30,000 per year, 27% between \$30,000 and \$50,000, 29% between \$50,000 and \$100,000, and 15% above \$100,000.

Data were collected in fall 2004 from introductory psychology courses, and participants received course credit for taking part in the study. This data collection was part of a larger study (Schwartz, Zamboanga, Rodriguez, & Wang, 2007) on identity and cultural context. Participants completed the study measures (which took approximately 1 hr to complete) at home and returned them to their instructor. The EPSI was the first measure presented.

### Measure: EPSI Identity Subscale

Adolescent identity was measured using the 12-item identity subscale from the EPSI (Rosenthal et al., 1981), which measures the extent to which participants have a clear sense of who they are and what they believe in. Six items are worded in a “positive” direction (toward identity synthesis), and 6 items are worded in a “negative” direction (toward identity confusion). Possible scores on the EPSI identity scale (heretofore referenced simply as the EPSI) range from 12 to 60. Sample items from this measure include “I know what kind of person I am” (identity synthesis) and “I feel mixed up” (identity confusion). The response scale used for the EPSI ranges from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*).

The EPSI has been used successfully with middle school (Schwartz, Pantin, Prado, Sullivan, & Szapocznik, 2005), high school (Reis & Youniss, 2004), and college (Markstrom & Kalmanir, 2001) students. As reported by Rosenthal et al. (1981), scores on the identity scale were positively related to the identity subscale from the Personal Maturity Inventory ( $r$  = .56; Greenberger & Sorensen, 1974). Moreover, in a longitudinal study following adolescents from their sophomore to senior year of high school, Reis and Youniss (2004) found that the most progressive changes in EPSI scores (i.e., increases in identity coherence and decreases in identity confusion) across adolescence were associated with positive relationships (e.g., adaptive communication, high support, low avoidance, low conflict) with parents and peers.

### Results

We first tested the one-factor, two-factor, and bifactor models against one another. In all three solutions, the metric for each latent variable was set by constraining the variance of each latent variable to 1. Additionally, in the bifactor model, the correlations between the overall factor and the method factors are set to zero (Chen et al., 2006). This is done so that the method effects remain separate from the total identity factor. We ascertained the fit of each individual model to the data using the comparative fit index (CFI) and non-normed fit index (NNFI)—which compare the fit of the specified model to the fit of a null model with no paths, covariances, or latent variables—and the root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR), which specify the extent to which the covariance structure specified in the model deviates from the covariance structure observed in the data. The chi-square index, which tests the null hypothesis of perfect fit to the data, is often overpowered, and we therefore did not use it in interpretation (cf. Steiger, 2006). In general, CFI and NNFI values of .95 or higher, and RMSEA and SRMR values of .06 or lower, represent excellent fit (Hancock & Freeman, 2001), with .90 representing the lower bound for an acceptable CFI or NNFI value and .08 representing the upper bound for an acceptable RMSEA or SRMR value (Kline, 2006; Quintana & Maxwell, 1999).

Results indicated that the bifactor model,  $\chi^2(39) = 72.83$ ,  $p < .001$ ; CFI = .97; NNFI = .95; RMSEA = .051 (90% CI = .032–.069); SRMR = .034; provided a better fit than either the two-factor model,  $\chi^2(51) = 107.79$ ,  $p < .001$ ; CFI = .93; NNFI = .91; RMSEA = .058; SRMR = .049; or the one-factor model,  $\chi^2(53) = 132.02$ ,  $p < .001$ ; CFI = .90; NNFI = .87; RMSEA = .068; SRMR = .055. In all three models, the fit statistics reported

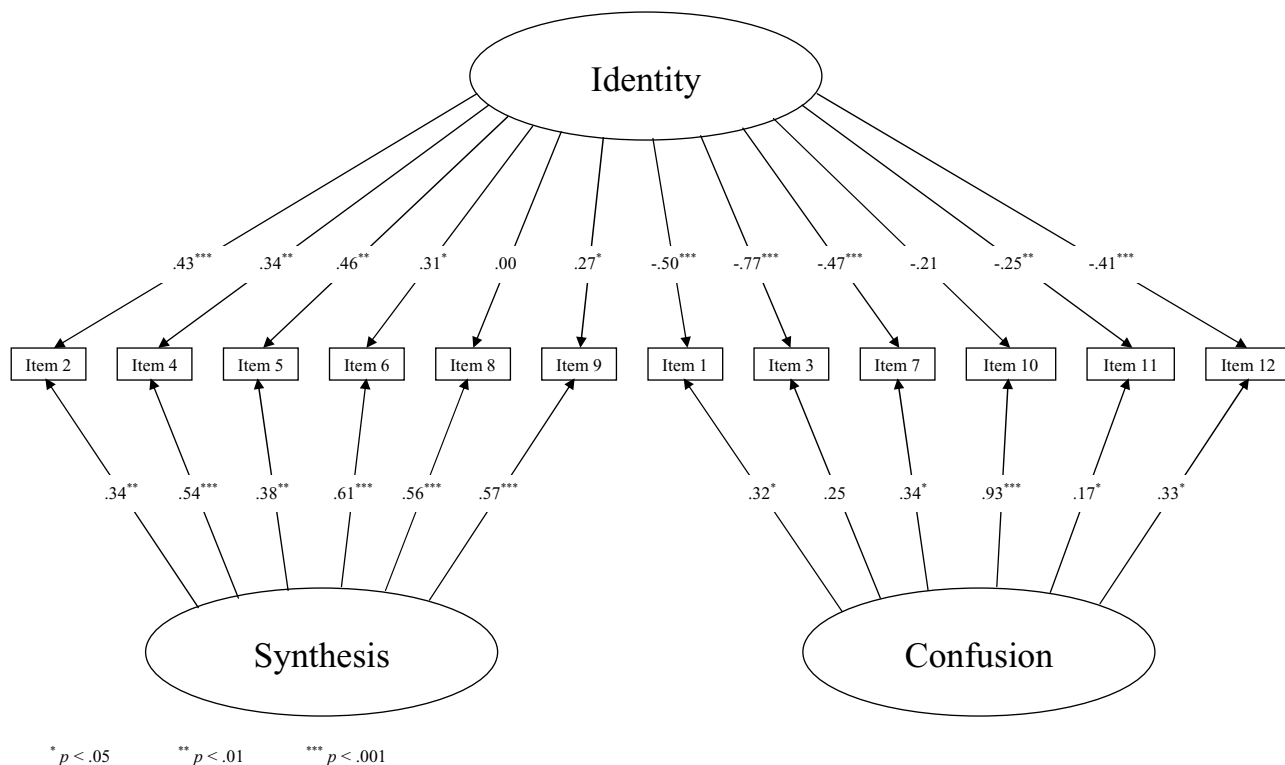


FIGURE 1.—Erikson Psychosocial Stage Inventory bifactor model.

here include two error covariances added based on modification indexes: Item 2 with Item 7 and Item 8 with Item 9. We retained these error covariances in Studies 2 and 3.

To test whether the fit of the bifactor model was significantly superior to the one- and two-factor models, we used the chi-square difference ( $\Delta$ ) test ( $\Delta\chi^2$ ), the difference in CFI values ( $\Delta CFI$ ), and the difference in NNFI values ( $\Delta NNFI$ ). The null hypothesis of equivalent model fit would be rejected if two of the following three criteria were satisfied:  $\Delta\chi^2$  significant at  $p < .05$  (Byrne, 2001),  $\Delta CFI \geq .01$  (Cheung & Rensvold, 2002), and  $\Delta NNFI \geq .02$  (Vandenberg & Lance, 2000). Statistical tests indicated that the bifactor model provided a significantly better fit to the data than either the two-factor model,  $\Delta\chi^2(12) = 34.96$ ,  $p < .001$ ;  $\Delta CFI = .041$ ;  $\Delta NNFI = .042$ ; or the one-factor model,  $\Delta\chi^2(13) = 59.19$ ,  $p < .001$ ;  $\Delta CFI = .070$ ;  $\Delta NNFI = .075$ . We therefore retained the bifactor model for subsequent analyses<sup>2</sup> (see Figure 1). Cronbach's alpha estimates for observed scores were the following: total identity score = .83, identity synthesis = .75, and identity confusion = .74.

**Discussion**

These results suggest that a bifactor solution for the EPSI, consisting of both an overall Identity factor and separate factors for Identity Synthesis and Confusion, provides a better fit to the data than either the one- or two-factor solutions. This finding

suggests that the task of identity development in emerging adulthood consists both of creating a positive overall sense of self and of balancing identity synthesis with identity confusion. This suggests that developing a positive sense of self does not guarantee a specific ratio between synthesis and confusion. Some individuals with a positive sense of identity may have more or less coherence and confusion than others. The emergence of synthesis and confusion as separate method factors suggests that even for individuals who are quite sure of themselves and of the direction they are taking in life, room still remains for “changing course” and for learning more about themselves. For example, taking a class can inspire a student to change her or his area of academic study, and a relationship with someone from another part of the world can change a person's perspective on herself or himself.

From a measurement perspective, these results also suggest that reasonably internally consistent subscales can be created for one's overall sense of identity, for identity synthesis, and for identity confusion. Using a total  $R^2$  of .30, equivalent to a multiple  $R$  of .55 and corresponding to Cohen's (1988) definition of a medium effect size, the total-identity and method factors explained at least 30% of variability in 9 of the 12 items. The items not meeting this criterion were “I work to keep up a certain image when I'm with people” (Item 11), “I have a strong sense of what it means to be male/female” (Item 8), and “I don't really feel involved” (Item 12). These items may need to be revised or deleted in future versions of the EPSI.

The superior fit of the bifactor model—with separate scales for overall identity and for positively and negatively worded items—allows for the possibility that overall identity, identity

<sup>2</sup>We were not able to evaluate invariance of the bifactor solution across gender or ethnicity because the ratio of participants to parameters estimated would have been only slightly greater than 1.

synthesis, and identity confusion may show somewhat different correlations to other identity measures and to measures of psychosocial adjustment. We therefore proceeded to examine issues of convergent validity with other identity measures in Study 2.

## STUDY 2

### Method

**Sample and procedures.** Participants in Study 2 were 194 students (46 men, 147 women, 1 unidentified by gender;  $M$  age = 19.90 years,  $SD = 3.29$ ) enrolled in introductory psychology courses at the same large, urban, public university in Miami. In terms of ethnicity, 27 participants were White, 68 were Black, and 99 were Hispanic. The majority of White (77%), Black (71%), and Hispanic (65%) participants were born in the United States. Foreign-born Whites were primarily from Europe and Canada; foreign-born Blacks were primarily from Haiti and Jamaica; and foreign-born Hispanics were primarily from Cuba, Colombia, Nicaragua, and Peru. Of participants reporting annual family income (82% of the sample), 21% reported less than \$30,000 per year, 23% between \$30,000 and \$50,000, 26% between \$50,000 and \$100,000, and 13% above \$100,000. Procedures in Study 2 were the same as those used in Study 1.

### Measures

**EPSI identity scales.** We again used the EPSI Identity Synthesis and Confusion scales. Cronbach's alpha coefficients for scores on the subscales were .82 for the overall Identity scale, .73 for Identity Synthesis, and .69 for Identity Confusion.

**Comparison Eriksonian measures.** We also used two additional Eriksonian measures—the Ego Identity Scale and the Identity Confusion Inventory (Côté, 1984; Schwartz, 2007; Schwartz, Zamboanga, Weisskirch, & Rodriguez, in press). These measures are intended to measure the same constructs as the EPSI identity subscales, and as such, they provide opportunities to assess the convergent validity of scores generated by the EPSI. A 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) was used for each of the comparison Eriksonian measures.

The Ego Identity Scale consists of 12 items ( $\alpha = .72$ ) assessing the extent to which the individual has developed a clear and consistent sense of self, goals, and plans for the future. Possible scores range from 12 to 60. The Identity Confusion Inventory consists of 8 items ( $\alpha = .70$ ) assessing the extent to which the individual feels conflicted, hesitant, or unsure about who she or he is or about her or his goals and plans. Possible scores range from 8 to 40. In past research, the Ego Identity Scale has been found to pattern closely with other measures of identity consolidation such as identity commitment, endorsement of the identity achieved status, and measures of subjective adulthood and community integration (Schwartz, 2007). The Identity Confusion Inventory has been found to cluster with the identity confusion items from the EPSI and with scores on the identity diffused status (Schwartz et al., in press).

**Identity status measures.** We utilized two continuous measures of identity status—the EIPQ (Balistreri et al., 1995) and the EOM–EIS–II (Bennion & Adams, 1986). Both of these measures have been found to function in accordance with theoretical expectations vis-à-vis indexes of personal agency and

well-being (Schwartz, Côté, & Arnett, 2005). The EIPQ assesses identity exploration and commitment—the dimensions underlying the identity status model. The Exploration subscale assesses the extent to which the individual has considered potential identity alternatives in the areas of political preference, religious ideology, career choice, personal values, friendship ideals, dating preferences, gender roles, and family relationships. Two items are included for each domain for a total of 16 exploration items (possible scores range from 16–80). The Cronbach's alpha estimate for this scale was .65. Although this estimate is low, it should be noted that exploration occurs unevenly across the various domains surveyed (Pastorino, Dunham, Kidwell, Bacho, & Lamborn, 1997) and that although these domains were placed together within identity status theory, exploration in one domain may not be related to exploration in other domains (Schwartz et al., 2006). The 16-item Commitment subscale ( $\alpha = .73$ ) assesses the extent to which the person has made commitments to one or more sets of goals, values, and beliefs in the same eight domains. Possible scores on the commitment subscale also range from 16 to 80. Sample items include “I have tried to learn about different occupational fields to find the best one for me” (exploration), and “I have firmly held views concerning my role in my family” (commitment).

The EOM–EIS–II generates continuous scores for each of the four identity statuses (diffusion, foreclosure, moratorium, and achievement) in eight content domains. Six of these domains are the same as those assessed by the EIPQ, and two domains differ between the two measures. The EOM–EIS–II assesses lifestyle and recreational activities instead of personal values and family relationships. The EOM–EIS–II contains 64 items, 16 measuring each of the four statuses. Possible scores for each of the statuses range from 16 to 80. Sample items include “I don't give religion much thought, and it doesn't bother me one way or the other” (diffusion); “My own views on a desirable life style were taught to me by my parents, and I don't see any need to question what they taught me” (foreclosure); “In finding an acceptable viewpoint to life itself, I find myself engaging in a lot of discussions with others and some self-exploration” (moratorium); and “I've gone through a period of serious questions about faith and can now say I understand what I believe as an individual” (achievement). Cronbach's alpha estimates in this sample were diffusion, .71; foreclosure, .87; moratorium, .76; and achievement, .77. We note that only continuous identity status scores were used in this study, and that categorical identity status classifications were not used.

### Results

We modeled the EPSI bifactor solution, as obtained in Study 1, and allowed each of the three factors (overall Identity Scale, Identity Synthesis, and Identity Confusion) to correlate with observed scores on the Ego Identity Scale, the Identity Confusion Inventory, the EIPQ Exploration and Commitment scales, and the continuous EOM–EIS–II identity status scales. The resulting model provided an adequate fit to the data,  $\chi^2(118) = 221.50$ ,  $p < .001$ ; CFI = .92; NNFI = .97; RMSEA = .068 (90% CI = .054–.081); SRMR = .062. Correlations between the EPSI bifactor model scales and other identity measures are presented in Table 1.

The total identity score was positively related to scores on the Ego Identity Scale and on the Foreclosed and Achieved Status

TABLE 1.—Correlations between EPSI subscales and comparison measures: Study 2.

Measure/Subscale	EPSI Subscale		
	Identity Total <sup>a</sup>	Identity Synthesis <sup>b</sup>	Identity Confusion <sup>b</sup>
Ego Identity Scale	.44**	.45***	-.47***
Identity Confusion Inventory	-.27*	-.53***	.41***
EIPQ Identity Exploration	.03	.01	.04
EIPQ Identity Commitment	.27	.53***	-.43***
EOM-EIS Identity Diffusion	.03	-.19*	.31***
EOM-EIS Identity Foreclosure	.21*	-.01	.15
EOM-EIS Identity Moratorium	-.30*	-.21	.41***
EOM-EIS Identity Achievement	.27*	.40***	-.29**

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

<sup>a</sup>Latent variable attached to all of the EPSI items. <sup>b</sup>Latent variable attached only to the corresponding EPSI items.

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

subscales, and it was negatively related to scores on the moratorium status. Identity synthesis was positively related to scores on the Ego Identity Scale and to identity commitment and achievement scores. Identity synthesis scores were negatively related to scores on the Identity Confusion Inventory and to moratorium and diffusion scores. Identity confusion scores were positively related to scores on the Identity Confusion Inventory and to diffusion and moratorium scores and negatively related to scores on the Ego Identity Scale and on identity commitment and achievement. Identity exploration scores were unrelated to any of the EPSI factors. Because the total Identity factor was specified as uncorrelated with the Identity Synthesis and Confusion factors (as is the assumption in bifactor models), the correlations of the Identity Synthesis and Confusion scores with comparison measures can be regarded as independent from the correlations of the total Identity factor with these comparison measures. As a result, it can be surmised that the effects of positively worded (synthesis) and negatively worded (confusion) items have substantive importance beyond the effects of the EPSI Identity scale as it has been traditionally scored.

We then explored the extent to which these correlations would be consistent across gender and across ethnicity. In these analyses, we examined only heterogeneity of covariance (equivalence of correlations across groups) to ensure that the model could be generalized across gender and across ethnic groups. Because only the relationships of the EPSI subscales to comparison identity measures—and not factor pattern coefficients, relationships among the EPSI subscales, or relationships among the comparison identity measures—were tested across gender and ethnicity, we estimated a finite mixture model (Muthén & Muthén, 2007). The KNOWNCLASS option in Mplus was used to specify gender or ethnicity as the categorical mixture variable (Muthén & Muthén, 2007). This approach allows for specified parameters to be estimated across levels of an observed categorical variable and is useful in cases in which the sample sizes within each group (e.g., genders or ethnic groups) are too small to reliably estimate a full multigroup model—which would be required to conduct a full invariance test (Vandenberg & Lance, 2000). In the invariance test by gender, only the correlations of the EPSI subscales to the other identity variables were allowed to vary across gender in the unconstrained model, and this model was

compared to a model with all of the correlations set equal across gender. We held correlations among the other identity variables equal across gender in both models. We conducted a similar procedure for ethnicity.

The chi-square difference test between the constrained and unconstrained models can be computed as the difference between the respective  $-2$  log likelihood values. This difference is distributed as a chi-square with degrees of freedom equal to the difference in the numbers of parameters between the two models. Following Kass and Wasserman (1995), we also report differences in the model information criteria—the Akaike information criterion (AIC), the Bayesian information criterion (BIC), and the adjusted BIC (ABIC). The chi-square difference indicated that the correlations between the EPSI subscales and the other identity variables were equivalent across gender,  $\Delta\chi^2(24) = 11.53$ ,  $p = .98$ ;  $\Delta\text{AIC} = 24.94$ ,  $\Delta\text{BIC} = 103.00$ , and  $\Delta\text{ABIC} = 26.98$ ; and across ethnicity,  $\Delta\chi^2(48) = 47.55$ ,  $p = .49$ ;  $\Delta\text{AIC} = 0.90$ ,  $\Delta\text{BIC} = 157.26$ , and  $\Delta\text{ABIC} = 5.21$ .

### Discussion

These results provide evidence for reasonable criterion validity for the EPSI subscales—both the total Identity score and the independent effects of positively and negatively worded items (represented as Identity Synthesis and Confusion). Indeed, the total Identity score, representing the way in which the EPSI has been traditionally scored, displayed fewer significant relationships with other identity measures than did the method effects—the synthesis and confusion items. The synthesis and confusion items were related to the comparison identity measures in theoretically expected ways—particularly with indexes of identity commitment, identity synthesis and confusion, and identity diffusion and achievement. These correlations strongly suggest that the synthesis and confusion scores are substantively meaningful and are more than just method effects. Indeed, as has been found with the Rosenberg Self-Esteem Scale (Quilty et al., 2006), the positively and negatively worded items carry substantive meaning as separate factors beyond their inclusion together within the larger Identity subscale.

Continuous scores for identity commitment and for the achieved status, as indexes of identity consolidation (Schwartz, 2007), were positively related to identity synthesis and negatively related to identity confusion as would be expected. These results provide some evidence for construct validity, as much of the convergence between Erikson's (1950) and Marcia's (1966) views of identity lies in the conceptualization of identity achievement as an index of consolidating and synthesizing a sense of self (Schwartz, 2005). The association of moratorium with identity confusion is consistent with prior literature (Kidwell et al., 1995; Meeus, 1996), suggesting that suspending commitments and searching for a sense of self is associated with disorientation and distress. In fact, moratorium was more strongly related than diffusion to identity confusion—calling into question the assumption that diffusion represents identity confusion within the identity status model (this is discussed more extensively in the General Discussion section following Study 3). Interestingly, the EPSI overall identity scale was not significantly related to identity commitment or to the diffused status. It appears that the overall identity scale from the EPSI maps onto Erikson's (1950, 1968) dimension of identity synthesis versus confusion but less strongly onto identity status. The Synthesis

and Confusion subscales from the EPSI appear to map onto both Erikson's theory and onto identity status—again suggesting that these two “smaller” subscales are necessary for scores on the EPSI to possess maximal construct validity.

The null relationship of identity exploration to all three EPSI scales—Overall Identity, Identity Synthesis, and Identity Confusion—supports the premise that there may be multiple types of identity exploration. Some of these types may lead to consolidating a sense of self in emerging adulthood, whereas others may not (Luyckx et al., 2008). The null relationships obtained here may result from aggregating these different types of exploration into a single variable.

The findings from Study 2 are consistent with a view of achievement as an index of identity consolidation (cf. Schwartz, 2007) and of moratorium as inviting identity confusion (Schwartz et al., in press). The question that remains, however, is whether the overall Identity subscale, Identity Synthesis, and Identity Confusion contribute collaboratively and independently to psychosocial functioning. We addressed this issue in Study 3.

### STUDY 3

#### Method

**Sample and procedures.** Participants in Study 3 were 523 students (115 men, 407 women, 1 unidentified by gender;  $M$  age = 20.45,  $SD$  = 4.40) enrolled in introductory psychology courses at the same urban, public university in Miami. The ethnic breakdown was 107 White, 57 Black, and 357 Hispanic. The majority of Whites (87%), Blacks (78%), and Hispanics (68%) were born in the United States. Foreign-born Whites were primarily from Europe and Canada; foreign-born Blacks were primarily from Haiti and Jamaica; and foreign-born Hispanics were primarily from Cuba, Colombia, Nicaragua, and Peru. Of participants reporting annual family income (86% of the sample), 16% reported less than \$30,000 per year, 24% between \$30,000 and \$50,000, 29% between \$50,000 and \$100,000, and 17% above \$100,000.

We performed data collection for Study 3 over the Internet. We uploaded measures onto an online platform, and we directed participants to the study Web site through the psychology department's research participation system. Participants were required to check a box indicating that they consented to participate before they could access the measures. The EPSI was administered first, followed by the internalizing measures and then the adaptive functioning measures.

#### Measures

**EPSI Identity subscales.** We again used the EPSI subscales. Internal consistency reliability estimates in Study 3 were .85 for the total Identity scale, .75 for Identity Synthesis, and .75 for Identity Confusion.

**Adaptive psychosocial functioning.** We measured adaptive psychosocial functioning 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, 2002; Schwartz, Côté, et al., 2005). These four scales have been shown to cluster closely together, which supports grouping them under the heading of agency and well-being (Côté, 1997).

We assessed self-esteem using the Coopersmith (1981) Self-Esteem Scale (25 items,  $\alpha$  = .87). 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). We assessed purpose in life using the Purpose in Life Scale (Crumbaugh & Maholick, 1969; 12 items,  $\alpha$  = .81). This scale assesses participants' sense of life purpose and direction. Sample item includes “In life, I have very clear goals and aims for myself.” We assessed internal locus of control using Côté's (1997) adaptation of Rotter's (1966) Locus of Control Scale, with a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) used in place of the traditional ipsative format. This adapted version consists of five items ( $\alpha$  = .63). Sample items include “What happens to me is my own doing.” We assessed ego strength using the Ego Strength Scale (Epstein, 1983; 26 items,  $\alpha$  = .81). This scale assesses the extent to which participants cope well, are resilient, and persevere in the face of adversity. Sample items include “I don't fall apart under stress as easily as most people do.” Each of these scales has been shown to function equivalently across ethnic groups (Schwartz, Côté, et al., 2005).

**Internalizing symptoms.** We operationalized internalizing symptoms in terms of anxiety and depression. To assess depressive symptoms, we utilized the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977; 20 items,  $\alpha$  = .91). We assessed anxiety symptoms using the Beck Anxiety Inventory (Beck, Epstein, Brown, & Steer, 1988; 18 items,  $\alpha$  = .92). Both of these instruments contain items referencing specific experiences during 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). The CES-D has been found to be especially sensitive to severity of depressive symptoms (Santor, Zuroff, Ramsay, Cervantes, & Palacios, 1995). The Beck Anxiety Inventory has been found to correlate well with other measures of anxiety (Osman, Kopper, Barrios, Osman, & Wade, 1997).

#### Results

We estimated a model in which the EPSI bifactor solution was allowed to correlate with scores on the indexes of psychosocial functioning. Due to the computational burden involved in estimating a model with a bifactor solution and six other latent variables (four for adaptive psychosocial functioning and two for maladaptive psychosocial functioning), we entered the psychosocial functioning measures as observed summed scores. All of these correlations were significant at  $p < .001$  (see Table 2). Both the identity total score and identity synthesis were positively related to all four indexes of adaptive psychosocial functioning and negatively related to anxiety and depression. Identity confusion was negatively related to self-esteem and purpose in life but positively related to internal locus of control and to ego strength. It was also significantly and positively related to anxiety.

To ascertain the extent to which overall identity, identity synthesis, and identity confusion subscales would independently and collaboratively relate to adaptive psychosocial functioning and to internalizing problems, we utilized a multivariate multiple regression technique. This approach to multivariate multiple regression is a form of path analysis in which multiple independent and dependent variables are included. Similar to

TABLE 2.—Correlations between EPSI subscales and psychosocial adjustment: Study 3.

Measure/Subscale	EPSI Subscale		
	Identity Total <sup>a</sup>	Identity Synthesis <sup>b</sup>	Identity Confusion <sup>b</sup>
Self-Esteem	.54***	.25***	-.24**
Purpose in Life	.56***	.17**	-.26**
Internal Locus of Control	.27***	.08	.25*
Ego Strength	.41***	.23***	.31***
Anxiety	-.29***	-.21***	.18***
Depression	-.37***	-.21***	.18

Note. EPSI = Erikson Psychosocial Stage Inventory.  
<sup>a</sup>Latent variable attached to all of the EPSI items. <sup>b</sup>Latent variable attached only to the corresponding EPSI items.  
 \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

univariate multiple regression, directional paths are estimated from each predictor to each outcome variable. We entered age, gender, and ethnicity as covariates, with ethnicity operationalized as dummy-coded variables for Black and Hispanic. We allowed identity synthesis and identity confusion as well as all pairs of endogenous variables to intercorrelate. Allowing the endogenous variables to correlate is consistent with the premise that indicators of positive and negative psychosocial functioning should all be related to one another (Keyes, 2005). Correlations between the overall Identity scale and the Identity Synthesis and Confusion scales were constrained to zero as were correlations between the covariates and the EPSI subscales.

The regression model fit the data well,  $\chi^2(149) = 352.51$ , *p* < .001; CFI = .98; NNFI = .97; RMSEA = .051 (95% CI = .044–.058); SRMR = .056. The vast majority (20 of 24) of the paths from demographic covariates to psychosocial functioning indexes were nonsignificant. Three of the significant effects of demographic variables involved gender. Women scored significantly higher than men on purpose in life, anxiety, and depression. Additionally, Hispanics reported significantly lower self-esteem than Whites. Overall, the model accounted for more than 40% of variability in self-esteem and purpose in life; more than 20% of variability in ego strength, anxiety, and depression; and more than 10% of variability in internal locus of control (see Table 3). Total identity, identity synthesis, and confusion were all significantly related to all of the outcomes except internal locus of control and ego strength. The total Identity score and Identity Confusion, but not Identity Synthesis, were posi-

tively related to internal locus of control; and the total Identity score and Identity Synthesis, but not Identity Confusion, were positively related to ego strength. These findings suggest that there was enough independence between these two dimensions of identity to facilitate separate relationships to self-esteem, purpose in life, ego strength, and depression. Moreover, these relationships were strong enough to account for at least 10%, and in some cases more than 40%, of variability in the psychosocial adjustment indexes. Importantly, beyond the effects of the overall Identity score, both Identity Synthesis and Identity Confusion were positively related to adaptive psychosocial functioning and negatively related to maladaptive psychosocial functioning. This finding further emphasizes the importance of the synthesis and confusion subscales, beyond the total identity subscale, in modeling the factor structure of the EPSI.

To ascertain the extent to which these results would be generalizable across gender and ethnicity, we estimated a path mixture analysis in which the paths from the EPSI subscales to the indicators of psychosocial functioning would be allowed to vary across gender and across ethnicity. We did not allow factor pattern coefficients, correlations between the EPSI subscales, or correlations between the psychosocial functioning indexes to vary across gender or ethnicity. For both gender and ethnicity, we compared this unconstrained model to a constrained model in which all parameters were held equal across groups. Results indicated that the path coefficients were equivalent across gender,  $\chi^2(18) = 19.02$ , *p* = .39;  $\Delta AIC = 2.04$ ,  $\Delta BIC = 74.28$ , and  $\Delta ABIC = 17.15$ ; and across ethnicity,  $\chi^2(36) = 25.73$ , *p* = .90;  $\Delta AIC = 20.55$ ,  $\Delta BIC = 173.27$ , and  $\Delta ABIC = 59.00$ .

GENERAL DISCUSSION

We conducted this set of studies to ascertain the extent to which a one-factor, two-factor, or hybrid bifactor structure would best characterize the EPSI as well as to evaluate the internal consistency reliability, cross-ethnic consistency, concurrent validity, and construct validity of the solution that we retained. The issue of factor structure has important theoretical as well as methodological implications. From a theoretical perspective, whereas Erikson (1950) proposed that identity would best be represented as a single continuum ranging from synthesis to confusion, Marcia (2002) called for a recasting of the identity stage as synthesis with confusion. A one-factor model would support Erikson’s (1950) conceptualization, a two-factor model would support Marcia’s (2002) conceptualization, and a bifactor model would support both of these conceptualizations.

TABLE 3.—Multivariate multiple regression: Psychosocial functioning on identity synthesis and confusion, Study 3.

Variable	Self-Esteem	Purpose in Life	Internal Locus of Control	Ego Strength	Anxiety	Depression
Age	.04	-.01	.05	.05	-.02	-.02
Gender (female)	-.01	.11*	.06	-.08	.12**	.11**
Ethnicity (Black)	-.07	-.04	-.01	-.02	-.04	-.01
Ethnicity (Hispanic)	-.14**	.02	.01	.02	.03	.04
Identity total <sup>a</sup>	.53***	.56***	.26***	.41***	-.29***	-.37***
Identity synthesis <sup>b</sup>	.29***	.21***	.09	.25***	-.25***	-.26***
Identity confusion <sup>b</sup>	.29*	.33***	.19***	.22	-.27**	-.30**
Total R <sup>2</sup>	.44***	.46***	.12**	.28***	.22***	.28***

Note. EPSI = Erikson Psychosocial Stage Inventory.  
<sup>a</sup>Latent variable attached to all of the EPSI items. <sup>b</sup>Latent variable attached only to the corresponding EPSI items.  
 \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

Downloaded By: [University of Miami] At: 18:52 10 February 2009

### *A Bifactor Model of Identity: Extent of Support in These Results*

These findings appear to support the bifactor model. This model implies that the EPSI, and perhaps the structure of Erikson's (1950) identity stage itself, may be characterized primarily by a single dimension—but that identity synthesis and confusion also function, to some extent, as separate variables. This suggests that although identity synthesis and confusion are inversely related at the bivariate level ( $r = -.83$  in the two-factor model), they are not mutually exclusive and can coexist within an individual. The questions to be addressed would therefore be both (a) how well developed is the person's sense of self and (b) how much synthesis, and how much confusion, is present within the individual.

Methodologically, it is important to ascertain the extent to which measurement instruments are able to accurately capture the theoretical constructs of interest. In this study, we were able to support both Erikson's (1950) and Marcia's (2002) positions. We were able to statistically reject a one-factor model that supported only Erikson's (1950) position as well as a two-factor model that supported only Marcia's (2002) position. Based on these results, we recommend that future research with this age group utilize the bifactor solution. To ascertain its appropriateness for different age groups, the bifactor solution should also be replicated with middle school and high school students from diverse backgrounds to ascertain its viability with early and middle adolescents in addition to emerging adults. It is also important for further research to examine the factor structure of the EPSI in ethnic and cultural groups not included in this set of studies. Such studies will further examine the universal applicability of Erikson's (1950) theory of identity.

Moreover, the bifactor solution assumes a series of constraints that can be implemented only in a structural equation modeling (SEM) framework (e.g., each item loads separately on the primary Identity factor and on either Identity Synthesis or Confusion; and the correlations between the primary Identity factor and the other factors are constrained to zero). As a result, analyses using the EPSI should be conducted using a latent variable framework in which these constraints can be applied. Simpler analyses using only observed variables—such as bivariate correlation, multiple regression, and analysis of variance—may not be appropriate for use with this measure (or with other Eriksonian identity measures). Latent-variable equivalents of these analyses, such as SEM and latent mean comparisons, should be used instead.

### *Associations of the EPSI Identity Dimensions to Comparison Variables*

Three primary findings emerged from the correlations of the EPSI subscales with comparison variables. First, the three EPSI subscales implied within the bifactor model—the overall Identity scale, Identity Synthesis, and Identity Confusion—were related largely as expected to other Eriksonian and identity status measures. Second, the three EPSI subscales contributed independently and collaboratively to several indexes of psychosocial adjustment. Third, both of the aforementioned findings generalized across gender and across ethnic groups. This pattern of findings speaks to the validity of the EPSI as an Eriksonian measure of identity as well as to the relevance of Erikson's

(1950, 1968) identity stage vis-à-vis adaptive and maladaptive psychosocial functioning.

*Convergent validity with other identity measures.* The finding that the EPSI subscales (primarily Identity Synthesis and Identity Confusion) correlated with identity status measures, again across gender and ethnicity, in theoretically consistent ways carries both theoretical and methodological importance. Identity synthesis, the achieved status, and identity commitment would be expected to interrelate as indexes of identity consolidation; and identity confusion would be expected to relate to the diffused and moratorium statuses. Interestingly, the diffused status, which, in theory, represents Erikson's (1950, 1968) notion of identity confusion, was less strongly correlated ( $r = .31$ ) with the EPSI Identity Confusion subscale than was the moratorium status ( $r = .41$ ). Although the comparatively low Cronbach's alpha for diffusion may partially explain this finding, the finding is more likely due to subtleties in the diffused status that are not captured by the EOM-EIS-II. For example, Luyckx, Goossens, Soenens, Beyers, and Vansteenkiste (2005) empirically extracted two types of diffusion—a “carefree” type that did not appear confused or distressed and a “diffused diffusion” status associated with significantly elevated scores on indexes of psychological distress. Both of these types of diffusion reflect a lack of systematic exploration coupled with an absence of commitment, which matches the definition of diffusion advanced by Marcia (1966) and operationalized within the EOM-EIS-II. However, aggregating across these two types of diffusion may have attenuated the relationship between the diffused status and identity confusion. It is possible, for example, that diffused diffusion is more consistent with identity confusion than is carefree diffusion.

On the other hand, Luyckx et al. (2008) were only able to identify one type of moratorium—one that is associated with distress, confusion, and low self-worth. Similarly, Schwartz et al. (in press) found that the moratorium status is related to psychosocial functioning through identity confusion. These results suggest that active identity exploration, represented by scores on the moratorium status and by present-tense items, is strongly associated with identity confusion. The EIPQ Exploration scale, in which items are phrased in the past tense, was unrelated to any of the EPSI subscales. Identity exploration, in and of itself, may both reflect open-mindedness and be associated with distress and confusion. However, when exploration is ongoing, it is likely to be coupled with the absence of commitment (i.e., the moratorium status), which is then associated with distress and poor psychosocial functioning (Luyckx et al., 2008; Schwartz et al., in press).

It is also important to note that the Identity Synthesis and Identity Confusion subscales were more strongly and consistently related to the comparison identity measures (with the exception of the Ego Identity Scale and the Foreclosure subscale from the EOM-EIS-II) than was the total Identity score. This may signify that identity status, at least as measured by the EIPQ and the EOM-EIS-II, is more concerned with identity synthesis or confusion than with the individual's overall sense of self. To some extent, this pattern of findings is consistent with some criticisms of the identity status model (e.g., Côté & Levine, 1988; van Hoof, 1999), which have framed the status model as misrepresenting Erikson (1950, 1968). To the extent to which Erikson's theory of identity is captured within the total

identity score—which did not correlate consistently with identity status measures—these criticisms appear to possess some merit.

### *Construct Validity With Measures of Psychosocial Functioning*

The total Identity score, Identity Synthesis, and Identity Confusion all appeared to make separate contributions to several important dimensions of emerging-adult psychosocial functioning. The observed correlation between Identity Synthesis and Identity Confusion ( $r = -.13$ ), along with constraining the correlations of the total Identity score with the other subscales to zero, suggested that the three EPSI subscales would be uncorrelated and that their contributions to the psychosocial functioning indexes would be largely independent. Most intriguingly, Identity Synthesis and Confusion were both positively related to indexes of adaptive psychosocial functioning and negatively related to indexes of maladaptive psychosocial functioning. Although identity confusion has been found to be associated with problematic outcomes in past research (e.g., Schwartz, Mason, Pantin, & Szapocznik, 2008), within the bifactor model, it appears that—beyond the effects of possessing a positive sense of self—some degree of both coherence and confusion is adaptive in emerging adulthood. Such a conclusion suggests that at least in emerging adulthood in the United States, it is adaptive to possess a synthesized sense of self and to feel that there is some “room left over” for more identity work. As a result, the most adaptive psychosocial functioning may be associated with having developed a positive sense of identity (cf. Reis & Youniss, 2004), feeling that one has a consistent self across time and across situations (cf. Dunkel, 2005), and leaving oneself open for further identity exploration (cf. Luyckx et al., 2008).

In summary, these results suggest that a bifactor solution for the EPSI, consisting of both an overall Identity scale and separate subscales for Synthesis and Confusion, provides scores with reasonable validity and reliability and is consistent with identity theory. All three subscales appear to be important in accurately representing the factor structure of scores generated by the measure and in explaining variability in indexes of adaptive and maladaptive psychosocial functioning. This bifactor solution may pave the way for more inclusive and integrative research on identity—from a perspective that brings together Erikson’s (1950, 1968) and Marcia’s (1966) viewpoints.

### *Limitations*

These results should be interpreted in light of some important limitations. First, the use of a university student sample may inhibit generalizability. There are important differences between college and noncollege emerging adults in terms of financial, emotional, and intellectual functioning (Halperin, 2001). As a result, care should be taken when generalizing these results to emerging adults who do not attend a university. Second, the overrepresentation of women in all three samples is a concern. Although we found invariance across gender in Studies 2 and 3 (we did not test for invariance in Study 1), it is not known whether the results would have been different had a more gender-balanced sample been used. Third, although the samples used in these studies were ethnically diverse, and although this represents an important advance in identity research (Schwartz, 2005; Sneed et al., 2006), a number of ethnic groups

were not well represented. Because the numbers of Asian Americans and Native Americans at the university where data were collected are extremely small, these groups were not included in analysis. Moreover, the Hispanics in this sample are somewhat representative of the Miami Hispanic population, but they do not represent the U.S. Hispanic population as a whole, which is largely Mexican American and Puerto Rican (Ramirez & de la Cruz, 2003). As a result, future studies should estimate the bifactor solution for the EPSI on ethnic groups other than those well represented in these samples.

Fourth, although the psychosocial functioning measures used in this study represent important indicators of well-being and distress in emerging adulthood (Côté, 2002; Schulenberg & Zarrett, 2006), other prominent behavioral outcomes in emerging adulthood, such as drug and alcohol use (Arnett, 2005) and sexual behavior (Lefkowitz & Gillen, 2006), were not included. The possibility of method biases cannot be discounted; some individuals may have been more likely to report both identity confusion and adjustment difficulties or to report both identity synthesis and high levels of well-being (cf. Podsakoff, Lee, MacKenzie, & Podsakoff, 2003). As a result, it is essential for future research to map the associations of the EPSI bifactor model to behavioral as well as psychosocial outcomes in emerging adulthood.

Despite these limitations, this study represents one of the first attempts to ascertain the dimensionality of Erikson’s (1950, 1968) identity stage, and to connect empirical measures of Erikson’s identity stage to specific statuses within Marcia’s (1966) model. Although Erikson’s theory of identity is indeed more expansive than the identity status model (Schwartz, 2001), the two theories do share some important themes in common (Waterman, 1999)—most notably a focus on identity synthesis and confusion. These results are supportive of such a link, specifically between the achieved status and identity synthesis, and between the moratorium status and identity confusion. These findings also suggest that EPSI scores have good psychometric properties and can be used to index an overall sense of identity—as well as identity synthesis and confusion—and that can be used to relate to or predict indexes of psychosocial functioning. Given that identity status studies have dominated the personal identity literature and that studies based directly on Erikson’s theory of identity have been less common, we hope that this study inspires more research drawing directly on Erikson’s work.

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