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# Development and Validation of the Revised Identity Style Inventory (ISI-5): Factor Structure, Reliability, and Validity

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Identity processing style refers to differences in how individuals process identity-relevant information as they engage or manage to avoid the challenges of constructing, maintaining, and/or reconstructing a sense of identity. The third version of the Identity Style Inventory (Berzonsky, 1992b) has been used to operationally define identity styles in most empirical investigations. The objective of the present series of studies was the development and validation of a new revised measure of identity processing style: Identity Style Inventory—Version 5 (ISI-5). Initially a pool of 39 generic items was generated that highlighted the processing of identity-relevant information on content-neutral issues such as personal values, goals, problems, and the like. Three style scales were identified by Exploratory Factor Analysis: A 9-item Informational-style scale; a 9-item Normative-style scale; and a 9-item Diffuse-avoidant style scale. Confirmatory factor analysis on an independent sample indicated that this 3-factor solution provided the best fit. Results from 5 studies provided evidence for the psychometric properties of the scales. Scores on the 3 style scales demonstrated good test–retest reliability and internal consistency. Theoretically predicted correlations between the ISI-5 scale scores and performance on measures of identity status, content, and commitment, and measures of rational and automatic processing provided evidence for their convergent and discriminant validity. It is concluded that the scales should be useful for researchers interested in investigating individual differences in identity processing style. Limitations and directions for future research are considered.

*Keywords:* identity style, commitment, rational processing, identity formation, psychometric

According to Erikson's (1968) psychosocial theory, the process of forming an individualized, well-integrated sense of identity plays a central role in personality development over the lifespan. A consolidated, well-integrated identity structure provides a personal

frame of reference for making decisions and interpreting experience and self-relevant information, which enables people to maintain a meaningful sense of self-sameness and self-continuity despite the random events and inevitable changes they encounter during their lives (Berzonsky, 2005a). Although Erikson's theory reflects his psychoanalytic training and is grounded in ego psychology, he and others have highlighted the role that cognitive processes may play in identity formation (e.g., Erikson, 1964; Inhelder & Piaget, 1958; Marcia, 1999). Findings from early investigations of the role formal operational reasoning may play in identity formation were inconsistent (see for example, Berzonsky & Barclay, 1981; but compare Rowe & Marcia, 1980). Subsequent research, however, indicated there are reliable stylistic differences in the social-cognitive strategies individuals use to construct, preserve, and/or reconstruct a sense of identity (Berzonsky, 2011). In particular, Berzonsky (1990, 2004) developed a social-cognitive model of identity formation that postulates three different identity processing styles: informational, normative, and diffuse-avoidant. These styles refer to reported preferences in the social-cognitive processes deployed when individuals deal with or attempt to evade identity conflicts and decisions (Berzonsky, 2011).

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The purpose of the present investigation was to develop and validate a revised measure of these identity processing styles. First, a brief theoretical description of the three processing styles and some relevant research is presented. The construction and development of the revised Identity Style Inventory (ISI) is then described. Finally, psychometric data relevant to the reliability and convergent validity of the Identity Style Inventory—Version 5 (ISI-5) scale scores are presented.

### Identity Processing Orientations

Marcia (1966) developed the identity status paradigm to operationally define Eriksonian identity formation. By crossing high and low levels of self-exploration (originally termed crisis) and commitment, Marcia identified four identity types or statuses: (a) identity achievement (highly committed following a period of self-exploration), (b) identity moratorium (currently engaged in self-exploration with limited commitment), (c) identity foreclosure (highly committed with limited self-exploration), and (d) identity diffusion (limited commitment but not engaged in self-exploration). A substantial body of literature has established reliable status differences along a number of social, personal, and cognitive dimensions (see, e.g., Berzonsky & Adams, 1999; Marcia, 1993, for reviews). Most identity research over the past four decades has been based on or inspired by the status paradigm.

The statuses are typically conceptualized as identity outcomes, because exploration and commitment are confounded within each status category. Consequently, a number of investigators have attempted to focus more directly on the process by which identity is formed (e.g., Berzonsky, 1990; Grotevant, 1987; Kerpelman, Pittman, & Lamke, 1997; Whitbourne & Weinstock, 1979). In particular, Berzonsky and Barclay (1981) hypothesized that Marcia's (1966) four statuses reflected three different ways of dealing with or managing to avoid identity-relevant conflicts and issues: an informed, rational orientation; a more automatic, normative or conforming orientation; and a procrastinating, diffuse-avoidant orientation (see also Berzonsky, 1988, 2011).

Berzonsky (1990, 2011) proposed that these processing orientations operate on different levels. Social-cognitive identity processing strategies comprise organized sets of the more elemental cognitive and behavioral responses individuals use to process and cope with identity-relevant information and conflicts. In contrast, identity processing style refers to relatively stable differences in the social-cognitive strategies that individuals typically prefer to employ to negotiate identity conflicts. Although research suggests that late adolescents normally are capable of utilizing all three social-cognitive strategies, there may be individual differences in how efficiently and consistently they are accessed and utilized (Berzonsky, 2011). Most research on these orientations has focused on identity processing styles.

### Informational Identity Processing Style

Individuals with an informational identity style are self-disciplined with a clear sense of commitment and direction. They are self-reflective, skeptical, and interested in learning new things about themselves; they intentionally seek out, evaluate, and utilize self-relevant information, and they are willing to accommodate self-views in light of dissonant feedback. This style is associated

with cognitive complexity, problem-focused coping, vigilant decision making, open mindedness, personal effectiveness, and an achieved or moratorium identity status (Berzonsky, 2011).

### Normative Identity Processing Style

Not everyone approaches potentially self-diagnostic information in a rational, open-minded fashion. Although people with a normative identity style are also conscientious, self-disciplined and possess a strong sense of commitment and purpose, they tend to internalize and adhere to the goals, expectations, and standards of significant others or referent groups in a relatively more automatic manner. They have a foreclosed identity status, a limited tolerance for uncertainty and a strong need for structure and closure; their primary goal is to defend and preserve their existing self-views and identity structure (Berzonsky, 2004; Soenens, Duriez, & Goossens, 2005).

### Diffuse-Avoidant Identity Processing Style

Individuals with a diffuse-avoidant style procrastinate and try to avoid dealing with identity conflicts and decisions as long as possible. When they have to act or make choices, their behavior is determined primarily by situational demands and consequences. How they act depends to a large extent on where they are and who they are with. Theoretically, people with high diffuse-avoidant scores may possess commitments but their commitments are likely to be volatile and quickly accommodated in light of changing situational demands, rewards, and circumstances (Berzonsky, 2011; Berzonsky & Ferrari, 2009). This identity style is associated with an external locus of control, limited self-control, weak commitments, self-handicapping attributions and behaviors, problem behaviors and a diffusion identity status (Berzonsky, 2011; Berzonsky & Ferrari, 2009).

### Theoretical Associations Between Identity Processing Styles and Related Identity and Cognitive Constructs

The construct of identity style was developed in an effort to explain differences in how individuals categorized in Marcia's (1966) identity status categories approach or manage to avoid the tasks of forming, maintaining, and/or revising their identity structure (Berzonsky, 1988, 2011; Berzonsky & Barclay, 1981). Consequently, performance on valid measures of identity style should differentially predict scores on measures of identity status. Specifically, an informational style should be linked to identity achievement; the normative style to identity foreclosure; and the diffuse-avoidant style to identity diffusion.

Theoretically, the informational style should also be positively associated with identity moratorium (Berzonsky, 1990), which is characterized by ongoing self-exploration (Marcia, 1966, 1993). However, research has demonstrated that commitment may suppress that relationship: Commitment is negatively correlated with moratorium scores, but positively associated with informational scores (Berzonsky, 1990; Berzonsky & Neimeyer, 1994). Further, style scores should account for unique variation in strength of identity commitment. That is to say, commitments may be strategically avoided (Berzonsky & Ferrari, 2009) or they may be formed in an intentional, reflective informative fashion or a more

automatic normative manner (Berzonsky, 1990; Marcia, 1966, 1993).

The type of self-attributes (see Cheek, 1989) people highlight in the way they define themselves and their identity should vary with identity processing styles (Berzonsky, 1994; Berzonsky, Macek, & Nurmi, 2003). An informational style focuses on personal self-components including personal goals, values, ideas, and moral standards. A normative style would primarily emphasize relatively stable collective self-attributes including religion, family, ethnicity, and nationality. Given that a diffuse-avoidant style focuses on situational demands and consequences (Berzonsky, 1990; Berzonsky & Ferrari, 2009), it should be associated with more variable social self-components such as reputation, popularity, and the impressions and reactions of others.

Identity processing styles include reasoning as well as identity components (Berzonsky, 1990, 2004). An informational style primarily involves deliberate, mentally effortful, reason-based problem solving and decision making. However, continually seeking new information and reconsidering problem solutions and decisions can become counterproductive. Therefore, an informational style is postulated to reflect experience-based automatic as well as conscious rational reasoning (Berzonsky, 2008, 2011). A normative style is postulated to be relatively more automatic in nature. While automatic processing may ordinarily be adaptive and economical in terms of the expenditure of mental resources and effort, it is prone to bias and distortion (Epstein, 1990). The diffuse-avoidant style, being driven by situational demands and hedonistic considerations, should be negatively associated with rational processing (Berzonsky, 1990, 2008).

### Measuring Identity Processing Styles

In an initial attempt to operationally define identity processing styles, Berzonsky (1989) created the original Identity Style Inventory (ISI-1). Statements that reflected the process dimension of the identity statuses in the content domains measured in Marcia's (1966) status interview were generated (six statements for each of the three styles). Participants rated the extent to which each statement was "not like" or "like" them. A 10-item commitment scale was also included. The 5-week, test-retest reliability of scores on the ISI-1 scales ranged from .78 to .80. Their internal reliabilities, however, were quite modest: .52 to .59. Despite the low internal reliability, scores on the scales generally differentiated between the statuses in a theoretically predictable way: Positive correlations were found between the informational style and identity achievement scores, the normative style and identity foreclosure scores, and performance on the diffuse-avoidant style and identity diffusion scales (see also Berzonsky, 1990). One seemingly anomalous finding was the lack of a positive correlation between the informational style and identity moratorium scores, which by definition involves ongoing effortful self-exploration. However, when commitment was statistically controlled, the hypothesized relationship was obtained (see also Berzonsky, 1990).

In an effort to improve its psychometric properties, Berzonsky (1992a) revised the original Inventory (ISI-2). In this revision, instead of relying exclusively on statements relevant to content areas in Marcia's (1966) Identity Status Interview, numerous "face valid" statements about identity processing were generated: for instance, "When I have to make a decision, I like to spend a lot of

time thinking about my options" (informational) and "When I have to make a decision, I try to wait as long as possible to see what will happen" (diffuse-avoidant). The revised ISI-2 Inventory comprised a 10-item informational style scale (coefficient  $\alpha = .62$ ); a 10-item diffuse-avoidant style scale (coefficient  $\alpha = .73$ ); a nine-item normative style scale (coefficient  $\alpha = .66$ ); and the original 10-item commitment scale (coefficient  $\alpha = .71$ ).

Additional modifications to the normative and informational scales were made in a third revision (Berzonsky, 1992b). The third version (ISI-3) contained an 11-item informational style scale (coefficient  $\alpha = .70$ ); a nine-item normative style scale (coefficient  $\alpha = .64$ ); a 10-item diffuse-avoidant style scale (coefficient  $\alpha = .76$ ); and a 10-item commitment scale (coefficient  $\alpha = .71$ ). Two-week, test-retest reliabilities of the ISI-3 scales were diffuse-avoidant  $r = .83$ ; informational  $r = .87$ ; normative  $r = .87$ ; and commitment  $r = .89$  (Berzonsky, 1992b). Over the past two decades, the third version of the Inventory (ISI-3) or translations of it have been used in numerous countries including Australia, Belgium, Canada, China, the Czech Republic, Denmark, Finland, Germany, Greece, India, Iran, Italy, the Netherlands, Pakistan, Poland, Slovakia, Spain, Switzerland, and Turkey (Berzonsky, 2005b, 2011). The ISI-3 scales have been found to have acceptable psychometric properties (see Berzonsky, 1992b, 2004, 2011). Internal reliabilities of the ISI-3 style scores generally range from .60 to .75, although estimates for translated versions, especially of the normative scale, have in some cases been lower (see Berzonsky, 2011). Convergent validity has been established by theoretically consistent relationships between the style scores and performance on measures of identity status, identity emphases (i.e., personal, social, or collective), cognitive reasoning, personal adjustment and well-being, and personality dimensions (Berzonsky, 2011).

Despite these strengths, there are some potential limitations with the ISI-3. In some cases, especially with translated versions of the normative scale, internal reliability of scores on the ISI-3 scales was found to be less than .60. To some extent, the moderate internal reliability may reflect the bandwidth of the theoretical construct, which comprises cognitive processing as well as identity components, but some other considerations may be relevant. For instance, like a number of measures of identity (e.g., Adams, 1999; Balistreri, Busch-Rossnagel, & Geisinger, 1995), some of the item statements in ISI-3 refer to different specific content domains such as religious or political beliefs (see Smits et al., 2008; Vleioras, 2007). Thus, it is not always clear whether some items are more salient than others for a given participant. That is to say, the style one endorses may depend on the personal relevance of the issue being considered. For instance, some participants may endorse an informational style with respect to personally relevant issues (e.g., religious values) but a diffuse-avoidant style with respect to self-irrelevant issues (e.g., political values), whereas others may endorse the same style across content domains. Both phenomena represent substantive problems that may blur the interpretation of the ISI-3 scores. In addition, these phenomena may suppress the reliability of the style scores and may, more generally, represent a problem for the internal structure of the scales.

On a related note, the salience of content domains may also vary across cultures or nations. Religious beliefs, for instance, may not be relevant to virtually all participants in some cultures or nations. On the other hand, most participants in other cultures or nations may accept religious beliefs in an automatic, normative fashion

without informed deliberation. These issues may create equivalence problems when the ISI-3 scales are being translated, which may in part account for the relatively low internal-reliability estimates obtained with some translated versions of the ISI-3 scales. Likewise, content-domain salience may vary across age groups (e.g., questions about education major will not be relevant to high school adolescents). Wording style statements in a domain-neutral manner may, therefore, facilitate efforts to assess the cross-national and cross-age generalizability of the identity style theory.

Another potential problem with the ISI-3 is that some of the scale statements are worded in the present tense, whereas others are worded in the past tense (see Smits et al., 2008). Due to this mixture of retrospective items and items tapping into one's current endorsement of the identity styles, the ISI-3 scores may not be interpreted unequivocally as representing one's current identity style. The blend of current and past processing of identity-relevant information reflected in ISI-3 scores may be particularly problematic in longitudinal research. To adequately examine changes in identity style scores across time, it is important to have an instrument that assesses individuals' *current* identity processing styles within each of the time points.

The present investigation was an attempt to develop a revised version of the Identity Style Inventory and to obtain evidence relevant to the test-retest and internal reliability and convergent and discriminant validity of the scores of this revised measure.

### Phase 1: Constructing the Revised Inventory (ISI-5)

The revision process involved generating additional items for the three style scales and revising and adapting some of the statements contained in the third version of the Inventory (ISI-3). First, our goal was to create statements that referred to generic identity categories (e.g., values, goals, beliefs, life decisions, personal problems, and the like), rather than to ones that referred to specific identity domains (e.g., religion, political beliefs, college major, occupation, and the like). Thus, interviewees would be able to decide for themselves which personal problems, values, goals, and so on they would focus on rather than having to respond to ones relevant to a particular domain such as, for example, religious, political, or moral values. Second, statements were worded in the present tense. Finally, we attempted to focus on the processing of identity-relevant information and not the outcome of that process: for example, "When making important life decisions, I like to think about my options" (informational); "I automatically adopt and follow the values I was brought up with" (normative); and "Many times, by not concerning myself with problems, they work themselves out" (diffuse-avoidant).

The first four authors who had all published research on identity style in peer-reviewed journals, made judgments about the face validity of the pool of statements that had been generated. Thirty-nine style items were retained: there were 13 items for each style scale. In addition, the authors made judgments about the 10 items in the ISI-3 commitment scale. Some commitment items were revised to refer to generic identity areas and all were stated in the present tense: for instance, "I know what I want to do with my future" (commitment). One was deleted, which resulted in a nine-item identity commitment scale.

On the basis of this broad pool of items, Smits et al. (2008) developed a brief revised version of the Identity Style Inventory

(ISI-4), which has been used in a number of studies (e.g., Doumen et al., 2012; Luyckx, Lens, Smits, & Goossens, 2010; Missotten, Luyckx, Vanhalst, Branje, & Goossens, 2011; Smits, 2009, Ch. 3; Smits, Doumen, Luyckx, Duriez, & Goossens, 2011; Smits, Soenens, Vansteenkiste, Luyckx, & Goossens, 2010). Although this version has worked relatively well—e.g., the test-retest reliability over a 1-week interval for the informational, normative, and diffuse-avoidant scores were, respectively, .80, .85, and .87 (Smits, 2009, Chapter 3)—it has some problems. The criteria for selecting the items were overly strict, which may have resulted in the removal of essential items. Perhaps as a consequence, the reliability and validity of the scores on the normative scale in particular was questionable. Specifically, the internal reliability of scores on the ISI-4 normative scale tends to be less than .70, and it was found to have low to nonsignificant correlations with the commitment scale and to correlate highly with scores on the diffuse-avoidant scale (e.g., Doumen et al., 2012; Missotten et al., 2011; Smits et al., 2010, 2011). Given these problems, in the current set of studies we aimed to do further systematic psychometric and validation analyses with the broader set of revised items so as to arrive at a next and improved version of the ISI, that is, the ISI-5.

### Phase 2: Evaluating the Factor Structure of the ISI-5

#### Participants

The participants for this phase of the investigation consisted of two independent samples of undergraduate students enrolled at a large southern university in Tennessee. Sample 1 consisted of 403 participants (241 females and 162 males) with an age range from 17 to 26 years ( $M = 19.00$ ,  $SD = 1.38$ ). Sample 2 was composed of 440 participants (314 females and 126 males) who varied from 17 to 25 years in age ( $M = 19.25$ ,  $SD = 2.04$ ). The majority of the participants were Caucasian. Although information about race/ethnicity was not obtained from the participants in Sample 1, 57% of the participants in Sample 2 self-identified as Caucasian, 16% as African American, and 4% as Hispanic; 23% left the ethnicity question blank or self-identified as other. All students, who volunteered for extra-course credit, were administered the 39 identity style and nine commitment items in large group settings. (Additional tests, described below, designed to provide validity data were also administered to the participants in Sample 1.) All items were responded to on 1 (*not at all like me*) to 5 (*very much like me*) Likert-type scales.

#### Exploratory Factor Analysis (Sample 1)

Exploratory factor analyses (EFAs) were conducted to refine the item selection process. Sample 1 was used in this phase of the research program. First, a principal factors extraction with varimax rotation was performed on the 39 style items. The scree test, which plots the eigenvalues against the factors (Cattell, 1966), indicated that the items measured three factors. Twelve items with loadings less than .40 on their relevant factor and/or cross-loadings greater than .35 were deleted. The final three-factor solution (see Table 1), which accounted for 39% of the variance, consisted of a nine-item informational style scale (coefficient alpha = .77), a nine-item normative style scale (coefficient alpha = .75), and a nine-item diffuse-avoidant style scale (coefficient alpha = .79).

Table 1  
Factor Loadings of the Revised Identity Style Inventory Scales

Items	EFA (Sample 1)			CFA (Sample 2)
	1	2	3	
<b>Diffuse-avoidant items</b>				
When personal problems arise, I try to delay acting as long as possible	<b>.58</b>	-.10	-.01	<b>.59</b>
I'm not sure where I'm heading in my life; I guess things will work themselves out	<b>.57</b>	-.08	-.09	<b>.33</b>
My life plans tend to change whenever I talk to different people	<b>.57</b>	.00	.04	<b>.54</b>
Who I am changes from situation to situation	<b>.55</b>	-.03	.00	<b>.46</b>
I try not to think about or deal with problems as long as I can	<b>.53</b>	-.12	.20	<b>.61</b>
I try to avoid personal situations that require me to think a lot and deal with them on my own	<b>.51</b>	-.12	.26	<b>.44</b>
When I have to make a decision, I try to wait as long as possible in order to see what will happen	<b>.51</b>	.12	.05	<b>.50</b>
It doesn't pay to worry about values in advance; I decide things as they happen	<b>.46</b>	-.14	.01	<b>.34</b>
I am not really thinking about my future now, it is still a long way off	<b>.42</b>	-.22	-.01	<b>.36</b>
<b>Informational items</b>				
When making important decisions, I like to spend time thinking about my options	-.22	<b>.57</b>	-.03	<b>.55</b>
When facing a life decision, I take into account different points of view before making a choice	-.03	<b>.57</b>	.02	<b>.56</b>
It is important for me to obtain and evaluate information from a variety of sources before I make important life decisions	.03	<b>.57</b>	.00	<b>.54</b>
When making important decisions, I like to have as much information as possible	-.15	<b>.57</b>	.04	<b>.70</b>
When facing a life decision, I try to analyze the situation in order to understand it	-.30	<b>.55</b>	-.08	<b>.63</b>
Talking to others helps me explore my personal beliefs	.13	<b>.52</b>	-.13	<b>.26</b>
I handle problems in my life by actively reflecting on them	-.20	<b>.50</b>	-.03	<b>.50</b>
I periodically think about and examine the logical consistency between my values and life goals	-.16	<b>.46</b>	.15	<b>.43</b>
I spend a lot of time reading or talking to others trying to develop a set of values that makes sense to me	.22	<b>.40</b>	-.08	<b>.27</b>
<b>Normative items</b>				
I automatically adopt and follow the values I was brought up with	-.11	.06	<b>.60</b>	<b>.60</b>
I think it is better to adopt a firm set of beliefs than to be open-minded	-.01	-.12	<b>.58</b>	<b>.68</b>
I think it's better to hold on to fixed values rather than to consider alternative value systems	-.11	-.11	<b>.56</b>	<b>.73</b>
When I make a decision about my future, I automatically follow what close friends or relatives expect from me	.33	.10	<b>.56</b>	<b>.49</b>
I prefer to deal with situations in which I can rely on social norms and standards	.27	.09	<b>.47</b>	<b>.40</b>
I have always known what I believe and don't believe; I never really have doubts about my beliefs	-.33	-.04	<b>.45</b>	<b>.44</b>
I never question what I want to do with my life because I tend to follow what important people expect me to do	.23	.03	<b>.45</b>	<b>.45</b>
When others say something that challenges my personal values or beliefs, I automatically disregard what they have to say	.10	-.26	<b>.44</b>	<b>.43</b>
I strive to achieve the goals that my family and friends hold for me	.12	.31	<b>.41</b>	<b>.41</b>
Eigenvalue	4.49	3.20	2.86	

Note. EFA = exploratory factor analysis; CFA = confirmatory factor analysis. Values in boldface type indicate the highest factor loading for each item.

A nine-item identity commitment scale was also retained: A separate principal factor analysis indicated that all of the commitment items had loadings greater than .40 on a single factor (coefficient alpha = .82).

### Confirmatory Factor Analyses (Sample 2)

To evaluate the accuracy of the three-factor structure of the 27 items obtained by the exploratory factor analysis, a CFA was performed with Sample 2. CFA was conducted using Lisrel 8.50 with Maximum Likelihood Estimation (Jöreskog & Sörbom, 1993). To evaluate model fit, we inspected the Satorra-Bentler Scaled chi-square (SBS- $\chi^2$ , Satorra & Bentler, 1994) instead of the regular chi-square because the former corrects for data nonnormality. An SBS- $\chi^2$  to degree of freedom ratio (SBS- $\chi^2$ /df) close to 3.0 indicates acceptable model fit (Kline, 2005). We also inspected the root-mean-square error of approximation (RMSEA) and the standardized root-mean-square residual (SRMR). According to Hu and Bentler (1999), acceptable model fit is indicated by cutoff values of .08 or less for RMSEA and .09 or less for SRMR. In order to compare models, SBS- $\chi^2$  difference tests were used.

We first estimated a three-factor model, where each of the three identity styles was represented as a latent variable indicated by its corresponding items. To examine whether the three identity styles were distinct, this three-factor model was compared to three alternative two-factor models: that is, a model where the informational and the normative items were combined into one construct (Alternative Model 1); a model where the informational and diffuse-avoidance items were combined (Alternative Model 2); and a model where the normative and the diffuse-avoidance items were combined (Alternative Model 3).

The three-factor solution approached criteria for acceptable fit [SBS- $\chi^2$ (321) = 866.39; SBS- $\chi^2$ /df = 2.70; RMSEA = .06; SRMR = .08] and was clearly favored over each of the two-factor solutions, as indicated by significantly different chi-square statistics [ $\Delta$ SBS- $\chi^2$ (2) = 2843.93;  $p < .001$  for Alternative Model 1;  $\Delta$ SBS- $\chi^2$ (2) = 2459.98;  $p < .001$  for Alternative Model 2;  $\Delta$ SBS- $\chi^2$ (2) = 529.49;  $p < .001$  for Alternative Model 3]. In the final best fitting model, factor loadings ranged between .26 and .73 with a mean of .47 (all  $ps < .001$ ). In terms of correlations between the latent factors, the information-oriented style factor was unrelated

to the normative style factor ( $r = .04$ ;  $p > .05$ ) and negatively related to the diffuse-avoidant style factor ( $r = -.23$ ;  $p < .01$ ). The correlation between the normative style and the diffuse-avoidant style was not significant ( $r = .13$ ;  $p > .05$ ).

To assess the generalizability of this factor structure, we examined whether it would replicate across gender. To this aim, we performed a multigroup CFA, comparing an unconstrained model (i.e., a model where factor loadings were allowed to vary between male and female participants) to a constrained model (i.e., a model where factor loadings were set equal across gender). The unconstrained model did not have a significantly better fit compared to the constrained model [ $\Delta\text{SBS-}\chi^2(27) = 38.54$ ;  $p > .05$ ] in terms of the chi-square statistic. This analysis suggests that the factor structure was comparable across gender. With Sample 2, the internal reliabilities (coefficient alpha) for the scale scores were as follows: informational style .74; normative style .77; diffuse-avoidant style .71; and identity commitment .82.

### Phase 3: Validity of Scores on the ISI-5

The previous analyses indicated that the factor structure and internal consistency of the revised scale scores were sound. This phase of the research program focused on the reliability and convergent validity of the scores on the revised scales: Do scores on the ISI-5 scales correlate with measures of other identity and cognitive processes in theoretically predictable ways?

### Participants

Four samples of undergraduate students enrolled at a large southern university in Tennessee participated in this phase of the investigation. Sample 1 consisted of the same 403 participants (241 females and 162 males) who participated in Phase 2: they ranged in age from 17 to 26 years ( $M = 19.00$ ,  $SD = 1.38$ ). Sample 3 comprised 174 participants (113 females and 61 males). Their ages ranged from 18 to 26 years ( $M = 18.97$ ,  $SD = 1.29$ ). The fourth sample consisted of 70 participants (40 females and 30 males) who ranged in age from 18 to 30 years in age ( $M = 20.83$ ,  $SD = 2.76$ ). Sample five included 77 participants (47 females and 30 males) who ranged in age from 18 to 31 years in age ( $M = 20.43$ ,  $SD = 2.50$ ). Participants in Sample 5 filled out the ISI-5 twice, within a 2-week interval. Convergence of the ISI-5 scores with those on measures of other identity processes and cognitive measures was evaluated using Samples 1 and 3. Sample 4 was used to assess the convergence between scores on the revised ISI-5 scales and those measured by the third version of the Identity Style Inventory (ISI-3; Berzonsky, 1992b). The test-retest reliability of the ISI-5 scores was evaluated with Sample 5. The majority of the participants were Caucasian. In Samples 4 and 5, respectively, 66% and 56% of the participants self-identified as Caucasian, 20% and 29% as African American, 6% and 3% as Hispanic, 3% and 5% as Asian American, and the rest did not answer the ethnicity question or answered "other." All of the participants volunteered for extra-course credit and were administered the 27 identity style and nine commitment items in large group settings. (Additional tests, described below, designed to provide validity data were also administered.) All items were responded to on 1 (*not at all like me*) to 5 (*very much like me*) Likert-type scales.

### Procedures and Measures

To evaluate the convergent validity of the scores on the ISI-5, the revised scales and a battery of measures designed to assess identity status, self-components, identity commitment, and cognitive reasoning processes were administered to the participants in Samples 1 and Sample 3. Cronbach alphas for Samples 1 and 3, respectively, were: .77 and .74 (informational); .75 and .79 (normative); .79 and .83 (diffuse-avoidant); and .82 and .82 (commitment). The means and standard deviations for the revised scales appear in Table 2. Comparisons between female and male participants indicated that although females scored higher on commitment in both Sample 1,  $F(1, 400) = 3.89$ ,  $p < .05$  and Sample 3,  $F(1, 171) = 3.92$ ,  $p < .05$  and lower on diffuse-avoidance in Sample 3,  $F(1, 171) = 8.54$ ,  $p < .01$ , the effect sizes were extremely small (Table 2). The following criterion measures were also administered.

**Identity status.** Identity status was operationalized with ideological items from the Extended Objective Measure of Ego Identity Status (EOM-EIS; Grotevant & Adams, 1984). The ideological EOM-EIS comprises four eight-item identity status measures that were responded to on a 1 (*strongly disagree*) to 5 (*strongly agree*) Likert-type scale. Cronbach alphas for Sample 1 and Sample 3 were, respectively, .62 and .62 (achievement); .82 and .82 (foreclosure); .71 and .72 (moratorium); and .61 and .60 (diffusion). Validity data for the scales are presented in Adams (1999).

**Cognitive reasoning processes.** The Need for Cognition scale (NFC; Cacioppo, Petty, & Kao, 1984), which measures the extent to which individuals are motivated to engage in deliberate, effortful information processing, was used to assess intentional, rational reasoning (18 items; e.g., "I would prefer complex problems to simple ones"). Coefficient alpha was .90 in both Sample 1 and 3. Reliability and validity data are provided in Cacioppo and Petty (1982) and Cacioppo et al. (1984). Automatic, intuitive cognitive processing was assessed with the Faith in Intuition scale from the Rational Versus Experiential Inventory (RVEI; Epstein, Pacini, Denenes-Raj, & Heier, 1996). Epstein et al. (1996) found that experientially based, intuitive processing scores were associated with emotion-based reasoning such as stereotypic thinking, superstition, and naive optimism: (12 items; e.g., "I believe in

Table 2  
Means and Standard Deviations of Revised Scales

Scale	Total		Males		Females		Effect size
	M	SD	M	SD	M	SD	
Sample 1 ( $N = 403$ )							
Informational	3.66	0.59	3.59	0.62	3.58	0.58	.00
Normative	2.76	0.63	2.69	0.65	2.81	0.61	.00
Diffuse-Avoidant	2.18	0.66	2.24	0.68	2.14	0.65	.00
Commitment	3.91	0.68	3.83	0.71	3.97	0.65	.01*
Sample 3 ( $N = 174$ )							
Informational	3.70	0.56	3.66	0.60	3.72	0.54	.00
Normative	2.80	0.67	2.78	0.73	2.81	0.65	.00
Diffuse-Avoidant	2.08	0.69	2.27	0.77	1.96	0.62	.05**
Commitment	4.00	0.69	3.86	0.73	4.07	0.66	.02*

Note. Means are adjusted for number of items in each scale.

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

trusting my hunches"). Coefficient alpha was .83 in Sample 1 and .82 in Sample 3.

**Self-components.** The type of self-relevant information associated with different identity processing styles was measured with the Aspects of Identity Questionnaire (AIQ-IIIx) developed by Cheek, Tropp, Chen, and Underwood (1994). Participants rated how important various self-components or attributes are to their sense of self on a 1 (*not important to my sense of who I am*) to 5 (*extremely important to my sense of who I am*) Likert-type scale. The AIQ-IIIx contains three subscales: Personal self-components (10 items: e.g., personal goals, knowledge, values, and thoughts); Collective self-attributes (eight items: e.g., family, religion, race or ethnicity, and country); and Social self-elements (seven items: e.g., reputation, popularity, and impressions on others). Coefficient alpha for Samples 1 and 3, respectively, were: .83 and .84 (personal); .76 and .78 (collective); and .78 and .77 (social). Validity data are presented by Cheek (1989) and Cheek et al. (1994).

### Correlational Results (Samples 1 and 3)

The correlations between the scores on each style variable and those on the validation-criterion measures appear in Table 3. In both samples, the following theoretically predicted correlations were found: (a) the informational style was positively associated with identity achievement, commitment, an emphasis on personal self-components, and both rational and intuitive reasoning; (b) the normative style was positively correlated with identity foreclosure, commitment,<sup>1</sup> an emphasis on collective self-components, and intuitive reasoning processes; and (c) the diffuse-avoidant style was associated positively with a diffuse identity status and an emphasis on social self-components and negatively with commitment<sup>2</sup> and rational reasoning. Correlations between the style variables for Sample 1 and 3, respectively, were informational and normative  $r_s = -.03$  (*ns*) and  $.12$  (*ns*); informational and diffuse-avoidant  $r_s = -.19$  ( $p < .01$ ) and  $-.19$  ( $p < .05$ ); and normative and diffuse-avoidant  $r_s = .14$  ( $p < .01$ ) and  $.16$  ( $p < .05$ ).

Because of covariation between the ISI-5 variables and those within each block of validation measures (e.g., between the status measures), a series of regression analyses was performed to determine the unique relationship between the score on each style variable and those on the validation measures. In each of these analyses, scores on a style variable were regressed on a block of validation measures (e.g., the four status measures, the two cognitive measures, or the three identity components measures) and the two style measures not being regressed. As shown in Table 4, the same theoretically consistent pattern of relationships found with the zero-order correlations was replicated. In addition, the predicted correlation between the informational style and moratorium-status scores obtained in both samples when the other statuses and styles were controlled: Sample 1  $\beta = .32$ ,  $p < .01$ ; Sample 3  $\beta = .33$ ,  $p < .01$ . Because commitment was positively correlated with the informational style but negatively correlated with identity moratorium, ancillary partial correlations were performed on both samples to evaluate whether commitment played a role in suppressing the relationship (see Berzonsky, 1990; Berzonsky & Neimeyer, 1994). In Sample 1, when commitment was controlled the correlation between the informational and moratorium variables increased from  $.09$  (*ns*) to  $.29$  ( $p < .01$ ); in Sample 3 it

increased from  $.10$  (*ns*) to  $.35$  ( $p < .01$ ). Thus, it appears that the predicted positive relationship between an informational processing style and identity moratorium was suppressed by commitment.

One apparently anomalous finding involves the moderate positive zero-order correlation between the diffuse-avoidant style and moratorium-status scores (Table 3). To a large extent this association may be due to the strong relationship between Adams' (1999) measures of the diffusion and moratorium identity statuses, which load on a common factor. Controlling for the effect of a diffusion status in the regression analyses attenuated the relationship between diffuse-avoidant and moratorium scores.

The results in Table 3 provide evidence for the discriminant as well as convergent validity of scores on the style scales. Correlations between the informational scale and the foreclosure and diffusion status scales and the collective and social identity scales were relatively low ( $r^2 \leq .04$ ). Likewise, limited associations were found between the normative scale and the achievement, moratorium, and diffusion status scales and the personal identity scale and between diffuse-avoidant scores and

<sup>1</sup> An anonymous reviewer suggested the possibility that similar items about beliefs in the commitment and normative scales might have artificially inflated associations between scores on these two scales. Deleting the two belief items from the commitment scale and recomputing the correlations and beta coefficients between the normative and commitment scales in Tables 3 and 4, indicated that this was not the case. Correlations between the normative and the nine-item and seven-item commitment scales were, respectively,  $.27$  ( $p < .01$ ) and  $.26$  ( $p < .01$ ) for Sample 1 and  $.31$  ( $p < .01$ ) and  $.30$  ( $p < .01$ ) for Sample 3. Regression coefficients for the normative and the nine-item and seven-item commitment scales, with the effects of the other two style variables controlled were, respectively,  $.52$  ( $p < .01$ ) and  $.49$  ( $p < .01$ ) for Sample 1 and  $.62$  ( $p < .01$ ) and  $.57$  ( $p < .01$ ) for Sample 3.

<sup>2</sup> An anonymous reviewer was concerned about possible overlap between items measuring diffuse-avoidance and items measuring commitment. We did a number of additional analyses to examine the degree of overlap between the diffuse-avoidant style and commitment. We did these analyses on Sample 2 (i.e., the largest sample in the study). First, we did a principal components analysis (PCA) on the items tapping into diffuse-avoidance and commitment. A two-component solution with varimax rotation showed that only one item did not load as expected. The diffuse-avoidance item reading "I am not sure where I'm heading in my life; I guess things will work themselves out" did not load on the component defined by the diffuse-avoidance items (.10) and instead loaded negatively ( $-.63$ ) on the component defined by the commitment items. All other diffuse-avoidance items had their primary loading on the diffuse-avoidance component and did not have cross-loadings  $> .40$  on the commitment component. Conversely, all commitment items had their primary loading on the commitment component and did not have cross-loadings  $> .40$  on the diffuse-avoidance component. Second, we did a confirmatory factor analysis (CFA), thereby comparing two models: one in which the diffuse-avoidance and commitment items loaded on separate factors and one in which these items loaded on a common factor. The fit of the two-factor model was clearly superior to the fit of a one-factor model [ $\Delta\chi^2(1) = 185.76$ ;  $p < .001$ ]. Modification indices again suggested that the fit of the model could be improved by allowing the item "I am not sure where I'm heading in my life; I guess things will work themselves out" to load on the commitment factor rather than on the diffuse-avoidance factor. Overall then, it seems like the potential problem of item overlap is limited to only one item. We redid the main validation analyses of the diffuse-avoidance scale without this item and found that this did not change the pattern of results.

Table 3  
*Bivariate Correlations Between Identity Processing Styles and the Validation Criterion Measures*

Validity measures	Informational		Normative		Diffuse-Avoidant	
	Sample 1	Sample 3	Sample 1	Sample 3	Sample 1	Sample 3
Identity statuses						
Achievement	<b>.31**</b>	<b>.35**</b>	.12**	.19*	-.40**	-.33**
Foreclosure	-.15**	.01	<b>.62**</b>	<b>.64**</b>	.22**	.20**
Moratorium	<b>.09</b>	<b>.10</b>	-.15**	-.16*	.47**	.48**
Diffusion	-.14**	-.08	-.10	.01	<b>.46**</b>	<b>.58**</b>
Cognitive reasoning processes						
Rational	<b>.34**</b>	<b>.31**</b>	-.28**	-.14	-.33**	-.37**
Intuitive	<b>.19**</b>	<b>.29**</b>	<b>.20**</b>	<b>.30**</b>	-.03	-.11
Aspects of identity components						
Personal	<b>.44**</b>	<b>.41**</b>	.12*	.11	-.24**	-.26**
Collective	.13*	.18*	<b>.44**</b>	<b>.53**</b>	-.08	-.07
Social	.17**	.20*	.37**	.37**	<b>.15**</b>	<b>.20**</b>
Commitment						
Commitment	<b>.27**</b>	<b>.30**</b>	<b>.27**</b>	<b>.31**</b>	-.56**	-.60**

Note. Coefficients in bold were predicted to be significant.

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

foreclosure, intuitive reasoning, and collective identity ( $r^2 \leq .04$ ).

#### Relationships Between the ISI-5 and ISI-3 Scales (Sample 4)

The convergent and discriminant validity of scores on the ISI-5 style scales was also examined by administering the ISI-5 and ISI-3 (Berzonsky, 1992b) scales to the participants in Sample 4. Cronbach alphas for the scores on the ISI-5 scales were as follows: Informational .86; Normative .82; Diffuse-

Avoidant .87; and Commitment .85. Alpha coefficients for the scores on the ISI-3 scales were as follows: Informational .80; Normative .77; Diffuse-Avoidant .87; and Commitment .85.

The correlations between the scores on the ISI-5 and ISI-3 scales were as follows: Informational  $r = .72$ ; Normative  $r = .73$ ; Diffuse-Avoidant  $r = .79$ ; and Commitment  $r = .75$  (Table 5). Although scores obtained with the ISI-3 and ISI-5 are not fully redundant, the strong convergence between both measures suggest that they essentially tap into the same underlying identity style constructs. Evidence for the discriminant validity of the ISI-5 style scores was provided by the relatively low correlations between the

Table 4  
*Regression Coefficients: Identity Style Regressed on Validation Criterion Measures*

Validity measures	Informational		Normative		Diffuse-Avoidant	
	Sample 1	Sample 3	Sample 1	Sample 3	Sample 1	Sample 3
Identity statuses						
Achievement	<b>.29**</b>	<b>.29**</b>	.09*	.13*	-.23**	-.21**
Foreclosure	-.17**	-.11	<b>.59**</b>	<b>.58**</b>	.08	.01
Moratorium	<b>.32**</b>	<b>.34**</b>	-.19**	-.24**	.32**	.27**
Diffusion	-.16**	-.08	-.05	-.03	<b>.21**</b>	<b>.34**</b>
Cognitive reasoning processes						
Rational	<b>.31**</b>	<b>.29**</b>	-.28**	-.13	-.29**	-.31**
Intuitive	<b>.17**</b>	<b>.26**</b>	<b>.22**</b>	<b>.29**</b>	.01	-.10
Aspects of identity components						
Personal	<b>.45**</b>	<b>.38**</b>	-.11	-.17*	-.32**	-.28**
Collective	-.07	-.13	<b>.40**</b>	<b>.55**</b>	-.14*	-.23**
Social	.03	.12	.22**	.06	<b>.34**</b>	<b>.41**</b>
Commitment						
Commitment	<b>.31**</b>	<b>.27**</b>	<b>.52**</b>	<b>.62**</b>	-.64**	-.71**

Note. Beta coefficients in bold were predicted to be significant. Effects of the other two style variables and the other dependent variables within each block are controlled.

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

Table 5  
Correlations Between Scores on the ISI-5 and ISI-3 Identity Processing Style Scales

Variable	INFO ISI-3	NORM ISI-3	DIFF ISI-3
INFO ISI-5	.72**	.25*	-.35**
NORM ISI-5	.09	.73**	.10
DIFF ISI-5	-.25*	-.15	.79**

Note. ISI-5 = Identity Style Inventory—Version 5; ISI-3 = Identity Style Inventory—Version 3 (Berzonsky, 1992b); INFO = Informational Style; NORM = Normative Style; Diff = Diffuse-Avoidant Style.

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

scores on each ISI-5 scales and the other two ISI-3 style scales. For example, scores on the ISI-5 normative scale did not correlate significantly with the scores on either the ISI-3 informational or diffuse-avoidant scales (Table 5).

### Test-Retest Reliability (Sample 5)

The test-retest reliability of the scores on the ISI-5 scales was evaluated by administering the scales twice to the 77 participants in Sample 5 over a 2-week interval. At Time 1, coefficient alpha for the scores on the informational, normative, diffuse-avoidant, and commitment scales, respectively, were .82, .78, .89, and .89. At Time 2, they were .80, .80, .89, and .89, respectively. The 2-week test-retest reliabilities for the scores on the scales were as follows: Informational  $r = .81$ ; normative  $r = .78$ ; diffuse-avoidant  $r = .77$ ; and commitment  $r = .83$ .

### General Discussion

The purpose of the present investigation was to develop and validate a fifth revised measure of identity processing styles. In contrast to previous style assessments, we sought to develop scales consisting of items that dealt with content-neutral identity categories (e.g., life decisions, goals, beliefs, values, personal problems, and so on) instead of statements that pertained to specific identity domains (such as religious values, political beliefs, occupational aspirations, college major, and the like). Our goal was to generate items that would enable interviewees to decide for themselves which content domains were relevant to them instead of requiring them to focus on domains specified in the statement. Further, we generated statements worded in the present tense and ones that focused on the processing of identity relevant information rather than the outcome of that processing.

An initial list of 39 statements (13 for each style scale) was generated and refined via principal factor analyses (PFA). The PFA yielded three style scales on which items loaded at least .40 with no cross-loadings greater than .35: A nine-item Informational-style scale; a nine-item Normative-style scale; and a nine-item Diffuse-avoidant style scale. A confirmatory factor analysis (CFA) performed on these 27 items indicated that a three-factor solution provided the best fit. Further, the three-factor solution held across gender. Across five samples the internal reliabilities (coefficient alpha) of the scores on the ISI-5 style scales varied from .74 to .86 (Informational,  $M = .79$ ); .75 to .82 (Normative,  $M = .79$ ); and .71 to .89 (Diffuse-avoidant,  $M = .83$ ). Coefficient alpha for scores on the Commitment scale varied from

.82 to .89 ( $M = .85$ ). Test-retest reliabilities of scores on the ISI-5 scales ranged from .77 to .83.

Convergent and discriminant validity was evaluated by examining whether scores on the new scales correlated with measures of identity processes and cognitive reasoning in theoretically predictable ways. The validity data were consistent with predictions based on the identity style model (see Berzonsky, 1990, 2008, 2011). Informational scores were positively correlated with identity achievement, a personal sense of identity, strength of identity commitment and both rational and experientially based, automatic intuitive reasoning; they were not strongly correlated with those on the foreclosure, diffusion, collective, and social identity scales. Normative scores were positively linked with identity foreclosure, a collective sense of identity, strength of identity commitment and automatic reasoning but negatively with rational reasoning. Relatively low associations were obtained between normative scores and those on the achievement, diffusion, moratorium, and personal identity scales. Diffuse-avoidant scores were positively correlated with identity diffusion and a socially based sense of identity that highlighted popularity and expectations of others and negatively associated with strength of identity commitment and rational reasoning. Their discriminant validity was indicated by low relationships with those on intuitive reasoning and the foreclosure and collective identity scales. Not only was the validation effort successful, the findings contribute to a burgeoning empirical literature on identity processing styles (e.g., Berzonsky, 1990, 2004, 2011).

### Directions for Future Research

The data presented here indicate that scores on the ISI-5 are reliable and valid indicators of the identity processing styles and that they have a clear internal structure. Convergence of scores on the ISI-5 and ISI-3 scales demonstrates that scores on both the ISI-3 and ISI-5 are reliable and valid measures for assessing individuals' identity processing styles. In our view, the most important difference between the ISI-3 and the ISI-5 is that the ISI-5 is a relatively more generic measure of identity styles. Contrary to the ISI-3, in which life domains are specified in some of the items, the items of the ISI-5 refer to the processing of identity-relevant information at a more wholesale, domain-neutral level, which enables participants to frame an item (e.g., values) within a domain of personal relevance (e.g., religious values, political values, moral values, and so forth). We believe this type of assessment may be advantageous for two types of future research on identity styles, that is, longitudinal research and cross-national research.

First, because of its domain-specific content, scores on the ISI-3 may yield interpretation problems in longitudinal research. For instance, if one were investigating changes in identity style scores from early to late adolescence, observed changes in the ISI-3 style scores may occur for different reasons. One possibility is that adolescents may have changed their actual style of processing identity-relevant information over time (which would reflect real developmental change). However, another possibility is that the relevance to the adolescents of some of the life domains in the items may have changed. A third possible explanation is that the extent to which adolescents differentiate between life domains may have changed over time, which would influence the consistency of their style of processing identity-relevant information

across content-domains. We hypothesize that this type of interpretation problem may be better addressed with the ISI-5 because participants can interpret its items in terms of the life domains that are most relevant to them at the particular developmental stage they are in. Future longitudinal research is needed to evaluate this hypothesis.

Further, we hypothesize that scores on the ISI-5 may provide a less culturally biased assessment of identity styles than those on the ISI-3 scales and may, as such, be relatively more useful in cross-national research. One striking finding with the ISI-3 was that the reliability of its scores (and, in particular, the reliability of the normative scores) was higher in U.S. samples compared to non-U.S. samples (e.g., Berzonsky, Branje, & Meeus, 2007; Duzriez & Soenens, 2006). We speculate that this phenomenon may be at least partially due to the domain-specific formulation of some of the ISI-3 items. Some of the domains specified in the ISI-3 may be comparatively less relevant in countries outside the United States and/or there may be between-country variability in the extent to which adolescents' style of processing differs between life domains. These between-country differences in the relevance of life domains may attenuate the reliability of the ISI-3 scores and, more important, may hamper a fair and straightforward comparison of the prevalence and correlates of identity style scores between nations and samples with different cultural backgrounds.<sup>3</sup> This issue needs to be addressed in future research.

## Limitations

It should be noted that scores on the ISI-5 scales measure *perceived* rather than actual processing of identity-relevant information. As such, the processing scales are potentially subject to the same threats as other self-report measures including deliberate and/or inadvertent distortion and bias. In addition, individuals can only potentially report on processing operations to which they have access, which indicates that the scale scores may underestimate the amount of processing, especially automatic processing, that individuals are engaged in. The extent to which self-reported processing scores correlate with actual performance on information-processing tasks is a question that needs to be addressed.

Future research needs to consider whether scores on translated versions of the scales will demonstrate the same psychometric properties. As noted before, the internal reliability estimates of scores on translated versions of the ISI-3 scales, especially the normative scale, tend to be lower than those reported with English versions of the scales. Related to this observation and related to our claim that the ISI-5 is a promising instrument for cross-national research, an important direction for future research is to address the measurement equivalence of ISI-5 style scores across countries and cultural groups. Once measurement equivalence has been established, scholars may address cross-cultural similarities and differences in the prevalence, developmental course, antecedents, and outcomes of the scores on the ISI-5. Likewise, the participants in the present studies were predominantly Caucasian university students who represented a relatively narrow range of age and education; it remains to be demonstrated whether scores on the ISI-5 scales are valid indicators of identity processing in participants of different ages, ethnic backgrounds, and/or levels of education. Also, because the participants were attending the same

university in one U.S. state, it is necessary to ascertain whether the results generalize to similar aged students attending universities in other U.S. states as well as other countries.

## Conclusion

The generic nature of the ISI-5 processing scales enables interviewees to decide for themselves which identity content to focus upon. The factor structure, reliability, and validity of the scores on the revised scales were found to be acceptable. Accordingly, the ISI-5 promises to be useful for researchers interested in investigating individual differences in identity processing style, including those researchers interested in examining identity styles from a developmental and/or cross-cultural perspective.

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<sup>3</sup> An anonymous reviewer disputed our suggestion that the Identity Style Inventory may be suitable for cross-cultural research arguing that the model seemed to reflect an "overwhelmingly Western" self-directed emphasis on informed decision making, which devalues a normative orientation to identity formation. However, numerous studies conducted in what might be considered to be "Western countries" such as the United States, Canada, Finland, and Belgium have found that a normative style is positively associated with: being conscientious and self-controlled; having firm commitments and a clear sense of purpose and direction; and having a positive sense of well-being such as high self-esteem and low depressive reactions (Berzonsky, 2011). Further, evidence suggests that neither the informational nor normative styles are inherently adaptive or maladaptive. For example, Smits et al. (2010) hypothesized that a normative (and informational) could be adopted for autonomous (freely chosen) or controlled (parental pressure and concerns about feelings of guilt and regret) motives. They found that commitment and well-being were positively correlated with autonomous motives for adopting a normative style but negatively associated with controlled motives. This study raises the possibility that a normative style, where people respect the views and values of family or authorities, can indeed be adaptive when people endorse their decision to rely on family or authorities. Such a pattern of volitionally endorsed adoption of normative expectations is particularly likely to be prevalent in non-Western countries. Clearly, more research is needed to examine the cross-cultural meaning and correlates of the identity styles.

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## Appendix

### Revised Commitment Scale

1. I know basically what I believe and don't believe.
2. I know what I want to do with my future.
3. I am not really sure what I believe. (reversed)
4. I am not sure which values I really hold. (reversed)
5. I am not sure what I want to do in the future. (reversed)
6. I have clear and definite life goals.
7. I am not sure what I want out of life. (reversed)
8. I have a definite set of values that I use to make personal decisions.
9. I am emotionally involved and committed to specific values and ideals.

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