A Social-Cognitive Perspective on Identity Construction

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Abstract

This chapter examines identity formation in terms of a social-cognitive model. Identity is conceptualized as a cognitive structure or self-theory, which provides a personal frame of reference for interpreting self-relevant information, solving problems, and making decisions. Identity is also viewed as a process that governs and regulates the social-cognitive strategies used to construct, maintain, and/or reconstruct a sense of personal identity. Three different identity-processing orientations or styles are explicated: Informational, normative, and diffuse-avoidant. Individuals with an informational processing style are skeptical of their own self-views and they intentionally seek out, process, and utilize identity-relevant information to personally resolve identity conflicts. In contrast, individuals with a normative processing style more automatically adopt a collective sense of identity by internalizing the standards and prescriptions of significant others and referent groups. Those with a diffuse-avoidant processing style are reluctant to confront and face up to identity conflicts; they procrastinate and delay as long as possible. Their actions tend to be influenced more by immediate situational rewards and demands than personally informed decisions or normative standards. Empirical evidence from several lines of research on identity-processing style is reviewed including linkages between identity style and a number of identity and cognitive processes; developmental changes in identity styles; and factors that may contribute to individual differences in identity styles such as gender, culture, parental processes, and personality traits. The role that identity-processing styles may play in effective and ineffective self-regulation and in maintaining a coherent sense of self-continuity is considered.

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Though you were to live three thousand years, or three million, remember that no man loses any other life than this which he now lives … The longest and the shortest thus come to the same … For a man cannot lose either his past or his future: for what a man has not, how can anyone take from him? Marcus Aurelius, *Meditations*.

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As Marcus Aurelius (170–180 A.D./1945) notes, life exists in the present. The decisions people make, the commitments they form, and the actions they take can only occur in the present—the past is gone and the future is indeterminate. Yet, as Erik Erikson (1968) explained, to be adaptive and functional, individuals need to perceive a sense of identity or continuity across the separate temporal episodes of their lives. Having the cognitive resources to represent the past, and then use transformations of those representations to anticipate the future, enables people to transcend time and maintain a sense of themselves as persistent volitional agents who think, doubt, will, act, desire, and self-regulate (Berzonsky, 2004a). Without a sense of identity or self-continuity people could not be held accountable for their prior actions; the threads from which social life is woven (e.g., promises, contracts, moral responsibilities, loans) would become meaningless if people did not own (or were not considered to own) their past (Chandler, Lalonde, Sokol, & Hallett, 2003). Moreover, the inability or failure to envision a continuum linking present actions to the promise of a future renders life meaningless and devoid of purpose (Chandler & Ball, 1990). The present chapter examines identity formation in terms of a social-cognitive model (Berzonsky, 1988, 1990). First, an overview of this social-cognitive model is presented. Three identity-processing orientations are then described, and empirical evidence from several lines of research on identity style is reviewed including linkages between identity style and a number of identity and cognitive processes; developmental changes; and factors that may contribute to individual differences in identity styles such as gender, culture, parental processes, and personality traits. Finally, the role that identity styles may play in effective and ineffective self-regulation and in maintaining a coherent sense of self-continuity is considered.

The Structure of Identity

In the cognitive tradition of Kelly (1955), Epstein (1973), Inhelder and Piaget (1958), and others, I have conceptualized identity as an implicit theory of oneself (see Berzonsky, 1988, 1990, 1993). A self-theory is a cognitive structure composed of a loosely organized system of personal constructs, assumptions, hypotheses, beliefs, schemas, and postulates relevant to the self interacting in the world (Epstein, 1980). Self-theories provide a conceptual frame for encoding, organizing, and understanding experiences and identity-relevant information. In the course of daily life, people form personalized constructs that govern the detection, selection, organization, and interpretation of environmental stimuli (Kelly, 1955). Human brains detect and represent regularities in nature, which become organized into concepts or personal constructs that, in turn, are synthesized into higher-order cognitive structures or theories (see Berzonsky, 1990, 1993; Kelly, 1955).

A self-theory includes more than representations of previous behavior and experience; it serves an executive function in that it includes the procedural knowledge or operative structures that guide and regulate efforts to cope and adapt in everyday life (Berzonsky, 1988; Epstein, 1980). It also includes a core of values, standards, epistemological assumptions, goals, and ideals that serve as criteria for monitoring and evaluating the predictive and practical usefulness of efforts to cope with and adapt to the demands and problems encountered in the process of daily life (Berzonsky, 1993). Efforts that are unsuccessful relative to some goal or standard may produce negative feedback, signaling the need to modify or adjust aspects of the identity structure. Within the context of a relatively stable world, adult identity development would require fairly minor adjustments of relatively stable self-constructs. In a more fluid world characterized by changing contextual demands and problems, however, previously useful constructions may be invalidated by changing circumstances. Optimal identity development in a rapidly changing world entails an ongoing dialectical interaction between control processes governed by the existing identity structure and regulatory efforts to modify it (Berzonsky, 1988, 2005a; see also Kerpelman, Pittman, & Lamke,

1997; Whitbourne, 1986). It should be noted that the utility of self-constructs depends on the standards and goals against which feedback is construed. Feedback is not inherently meaningful; its meaning depends on the frame of reference being used.

A Constructivist Epistemological Perspective

The model outlined here is based on constructivist epistemological assumptions about the nature of knowledge and knowing (see Berzonsky, 1986, 1993). In contrast to discovery views of identity (see Waterman, 1984, Chapter 16, this volume), a constructivist perspective assumes that people play a role in constructing both a sense who they think they are and the "reality" within which they live. As Kelly (1955) noted, to understand experiences, people manufacture personal constructs that govern the selection, integration, and understanding of environmental stimuli. Experiences and life episodes are not inherently meaningful. A person's reality reflects personal interpretations of objects and events, not the events in themselves. This identity-as-theory view does not imply that people always theorize about themselves in a conscious, intentional fashion (compare Moshman, 2005). Constructs may be acquired, for instance, indirectly from parents, peers, and others via modeling; more directly through formal schooling, instruction, and other sorts of cultural and social transmission; as well as from direct observation and experience. Further, the model I propose does not assert that people can necessarily articulate the beliefs, postulates, and constructs they hold about themselves (Berzonsky, 1990). Aspects of self-theories may be implicit and vaguely understood by their possessors. Most self-theorizing and self-regulation involve automatic (Bargh, 1997) or "intuitive" (Epstein, Pacini, Denes-Raj, & Heier, 1996) processes. However, there are individual differences in the extent to which the processes of self-construction and reconstruction are approached in a rational, open, and informed fashion. Further, as Baumeister, Bratskavsky, Muraven, and Tice (1998) argue, in the long run, deliberate, rational self-functioning may play a disproportionately valuable role in facilitating personal effectiveness by overriding previously useful automated behavioral routines or reasoning heuristics that become maladaptive when circumstances change. Even though from my theoretical standpoint I assume that people construct a sense of identity, they may go about that constructive process differently. Whereas some may approach the task in a deliberate, effortful fashion, others may more automatically internalize roles, values, and expectations of others; or they may opportunistically assume, and quickly abandon, roles and public presentations in different situations. Thus, from their own first-person perspectives, they would not all be expected to use the "language of construction" when describing their own process of identity formation (see Berzonsky, 1986, and compare Waterman, 1986, Chapter 16, this volume).

My model does not posit that a self-theory is a valid representation of one's "true" or essential self. People are not assumed to have direct introspective access to an accurate understanding of their true inner self. Instead, people construct a theory about who they *think* they are and what they *think* they want. Like formal theories, the validity of self-constructs is evaluated in terms of practical usefulness. Given a person's biological potential and the environmental contexts within which he or she lives, do her or his theoretical constructs provide explanations and interpretations that are personally intelligible and beneficial? Do these personal constructs solve the problems and answer the questions they were constructed to deal with? Consequently, people cannot arbitrarily create any viable identity they choose. The perception and understanding of information from reality (i.e., social, cultural, and physical contexts) is filtered through people's theoretical constructs and identity structure, which in turn influence what information they attend to and encode and how this information is interpreted. The cognitive structures alone, however, do not directly determine what will be perceived. The viability of personal

theoretical constructs is constrained by a person's genetically influenced characteristics and dispositions as well as by optical and acoustical feedback from the contexts within which she or he lives (Berzonsky, 1993; Kelly, 1955; Mahoney, 1991).

Finally, some readers may object to the notion of a self-theory, preferring instead the concept of, for instance, a self-story or self-narrative, as proposed in McAdams (Chapter 5, this volume) and others. Although a self-theory does provide a narrative or story about one's life, I prefer the term *self-theory* because I postulate that people rely on implicit constructs for explanatory purposes. In addition to providing a personal frame of reference for synthesizing and interpreting the various episodes one experiences, the postulates within the self-theory provide a basis for acting with foresight and making predictions about how to deal with problems and to attain personal goals (Berzonsky, 1990).

Self-Theorists: A Process Approach to Identity Formation

The model I propose postulates differences in the social-cognitive processes that individuals use to engage or avoid dealing with identity conflicts and issues. One might say that individuals operate as different types of self-theorists (see Berzonsky, 1988, 1989b). Early research indicated that formal operational reasoning was not consistently associated with identity formation (e.g., Berzonsky, Weiner, & Raphael, 1975; Cauble, 1976; Rowe & Marcia, 1980). Based on a review of this literature, Craig Barclay and I (Berzonsky & Barclay, 1981) conceptualized formal reasoning as a set of problem-solving strategies or processes that could be used to deal with identity-relevant problems, conflicts, and decisions. We further hypothesized that Marcia's four identity statuses (see Marcia, 1966; Kroger & Marcia, Chapter 2, this volume) reflected three different stylistic approaches to dealing with identity crises: an open, informed approach utilizing formal-reasoning strategies; an avoiding or delaying orientation; and an inflexible, closed approach that relies on conformity (see also Berzonsky, 1988, 1989b). These three approaches—now referred to, respectively, as the informational, diffuse-avoidant, and normative identity-processing orientations—are described below.

An Informational Processing Orientation: Scientific Self-Theorists

Individuals with an informational processing orientation deliberately seek out, process, and evaluate identity-relevant information. They are skeptical self-explorers who are open to new ideas and alternatives and are willing to suspend judgment in order to examine and evaluate their self-constructions. Consistent with the metaphor of an intuitive scientist (see, e.g., Inhelder & Piaget, 1958; Kelly, 1955), they function as scientific self-theorists who want to learn new things about themselves and to obtain accurate self-diagnostic information. They are considered to be rational agents who have or seek rational, informed explanations and reasons for their choices and actions. This orientation is hypothesized to lead to a well-differentiated but hierarchically integrated self-theory and to be characteristic of individuals classified in Marcia's (1966; Kroger & Marcia, Chapter 2, this volume) achieved or moratorium identity statuses (Berzonsky, 1988, 1989b). An informational identity-processing orientation is associated with cognitive complexity, problem-focused coping strategies, vigilant decisional strategies, and openness to alternative ideas, values, and behaviors (see Berzonsky, 2004a, for a review).

Diffuse-Avoidant Processing Orientation: Ad Hoc Self-Theorists

A diffuse-avoidant orientation involves a reluctance to confront and deal with identity conflicts and issues. If one procrastinates too long, actions and choices will be determined by situational demands and consequences. Such context-sensitive adjustments, however, are more

likely to involve transient acts of behavioral or verbal compliance rather than stable, long-term structural revisions in the self-theory. This processing orientation, originally identified as a diffuse orientation (Berzonsky, 1989a), is postulated to be typical of individuals categorized as having a diffused identity status (Marcia, 1966). When it became apparent that at least some strategic avoidance was involved, it was referred to as the *diffuse/avoidant* (confused and/or strategic) orientation (Berzonsky & Sullivan, 1992). The term *diffuse-avoidant* (with a dash instead of a slash) currently is preferred because it denotes that the orientation involves more than a confused or fragmented self; it reflects strategic attempts to evade, or at least obscure, potentially negative self-diagnostic information (Berzonsky & Ferrari, 2009). Individuals with a diffuse-avoidant orientation adopt an ad hoc, situation-specific approach to self-theorizing, which should lead to a fragmented set of self-constructs with limited overall unity (Berzonsky, 1989b). They assume a present-oriented, self-serving perspective that highlights immediate rewards and social concerns, such as popularity and impressions tailored for others, when making choices and interpreting events. Diffuse-avoidance is positively associated with efforts to excuse or rationalize negative performances, self-handicapping behaviors, impression management, limited commitment, and an external locus of control (Berzonsky, 1989a, 1990; Berzonsky & Ferrari, 1996, 2009).

A Normative Processing Orientation: Dogmatic Self-Theorists

Individuals with a normative orientation internalize and adhere to goals, values, and prescriptions appropriated from significant others and referent groups in a relatively automatic or mindless manner, that is, they make premature commitments without critical evaluation and deliberation (see Langer, 1989). They have a low tolerance for ambiguity and a high need to maintain structure and cognitive closure (Berzonsky, 1990). Individuals who adopt this protectionist approach function as dogmatic self-theorists whose primary goal is to conserve and maintain self-views and to guard against information that may threaten their "hard core" values and beliefs. This relatively automatic approach to self-construction is associated with a foreclosed identity status and should lead to a rigidly organized self-theory composed of change-resistant self-constructs (Berzonsky, 1989b; Berzonsky & Adams, 1999). A normative orientation is associated with firm goals, commitments, and a definite sense of purpose, but a low tolerance for uncertainty and a strong desire for structure (Berzonsky, 2004a).

Research on Identity-Processing Orientations

The identity-processing orientations are conceptualized as functioning on at least three levels (Berzonsky, 1990). The most elemental level consists of the various *cognitive and behavioral responses* that individuals actually perform and engage when dealing with identity-relevant information and issues. *Identity-processing strategies* comprise systematic collections of the more basic cognitive and behavioral units. *Identity-processing style* refers to the strategies that individuals characteristically use or prefer to utilize when dealing with identity conflicts. Evidence indicates that, by age 18 at the latest, most normal late adolescents are capable of utilizing the strategies that underpin the three styles (Berzonsky & Ferrari, 1996; Berzonsky & Kuk, 2005). Nonetheless, there may be reliable differences in how efficiently these strategies are accessed and how effectively they are used. Stylistic differences appear to reflect variation in motivational factors such as need for cognition, need for self-knowledge, and need for structure (Berzonsky, 2004a).

Most research has focused on the style level of these orientations, which is operationalized by a self-report *Identity Style Inventory* (ISI: Berzonsky, 1989a, 1992a, 1992b). The Inventory includes an identity commitment scale and scales for each of the three identity styles. The ISI has been found to have adequate psychometric

properties (Berzonsky, 1992a, 1992b, 2003). The English or translated versions of the ISI have been used in a diversity of cultural contexts including Canada, Spain, Turkey, Denmark, Greece, China, Italy, the Netherlands, Belgium, Iran, Pakistan, India, the Czech Republic, Slovakia, Finland, Poland, Germany, and Australia (see Berzonsky, 2006).

Convergent Validity

One basis for the construct validity of the identity style measures is the extent to which they converge with measures of other identity processes. The association between identity style and identity status is one of the most consistently replicated findings in the identity status literature. Identity foreclosure—firm commitment with limited self-exploration—is associated with a normative style, identity diffusion is associated with a diffuse-avoidant style, and identity achievement and moratorium are linked with an informational identity style (Berman, Schwartz, Kurtines, & Berman, 2001; Berzonsky, 1989a, 1990; Berzonsky & Adams, 1999; Berzonsky & Kuk, 2000; Berzonsky & Neimeyer, 1994; Krettenauer, 2005; Schwartz, Mullis, Waterman, & Dunham, 2000; Streitmatter, 1993). Strength of identity commitment has been found to be uniquely positively correlated with both the informational and normative styles and negatively associated with diffuse-avoidance (e.g., Berzonsky, 1989a, 1990, 2003, 2004a, 2008a). The unique contributions that the three styles make in accounting for significant variation in strength of identity commitment is consistent with the view that commitments may be formed and held in a relatively automatic (normative) or more mentally effortful, informed (informational) fashion (Berzonsky, 2003, 2008a; Berzonsky & Neimeyer, 1994). The types of self-elements or information on which individuals rely to define and ground their sense of identity have been found to be associated with identity style. As measured by the Cheek (1988) Aspects of Identity Questionnaire (AIQ), individuals with an informational style highlight personal self-elements such as personal values, goals, and standards; those with a diffuse-avoidant style emphasize social self-attributes including their reputation, popularity, and impressions made on others; those with a normative style stress collective self-components such as their family, religion, and nationality (Berzonsky, 1994a, 2005b; Berzonsky, Macek, & Nurmi, 2003; Lutwak, Ferrari, & Cheek, 1998). Considered together, these findings attest to the validity of style assessments as measures of identity processes. The styles, though, are postulated to include cognitive processing as well as identity dimensions. We now turn to a consideration of cognitive processing and identity style.

A Dual-Process Model

Following Epstein (1990) and others (e.g., Klaczynski, 2004; Petty & Cacioppo, 1986; Stanovich, 1999), my social-cognitive model postulates the operation of two parallel information-processing systems (see Berzonsky, 2008a). One is a rapid experience-based cognitive system that processes concrete, emotion-laden information in a relatively automatic fashion. Because this experiential or intuitive system (Epstein, 1990) does not make heavy processing demands, it is efficient and economical but susceptible to cognitive biases such as stereotypical thinking, paranormal beliefs, and naïve optimism (Berzonsky, 1988; Epstein et al., 1996). The experiential system encodes information in terms of concrete images, episodes, figurative representations, and narratives that are contextualized or welded to real world knowledge or experience (Epstein, 1990; Stanovich, 1999). The second system—the reason-based, rational system—in contrast processes decontextualized, symbolic information in an analytical and effortful manner. A decontextualized mode of thinking enables one to think hypothetically and form meta-representations, or what Inhelder and Piaget (1958) term second-order mental operations, decoupling symbolic representations from the concrete factual knowledge on which they were originally based.

This provides a basis for thinking about the process by which conclusions and commitments were arrived at and critically evaluating the extent to which those conclusions correspond to relevant and available evidence. The rational system is deliberate and conscious and relies on logical analyses and evidence to inform and justify decisions and actions. Because it involves considerable mental effort and processing, it is less prone to distortion; it can override automatic processing and calibrate views to the quality of the evidence they are based on (Sá, Kelley, Ho, & Stanovich, 2005; Stanovich, 1999). The automaticity associated with the experiential system makes it the default option in most life situations (Epstein, 1990). Both systems are hypothesized to play a role in self-construction and self-regulation, but people can switch between them, and reliable individual differences in the use of, or preference for, each have been reported (Berzonsky, 2008a; Epstein et al., 1996). The rational system is composed of cognitive resources and strategies such as capacity of working memory, efficiency of information retrieval, and accuracy of stimulus differentiation and epistemological goals and values (Stanovich & West, 1998). Epistemological values include the extent to which individuals value cognitive activities such as elaborating complex information, considering alternative explanations, and rationally evaluating evidence that may conflict with existing views (see Stanovich, 2008). The experiential system consists of cognitive processes that operate with limited conscious awareness and heuristics that are automatically deployed.

Identity-Processing Style and Cognitive Processing

According to my social-cognitive model, individuals with different identity-processing styles vary in the extent to which they use, or prefer to use, different cognitive processes and strategies when dealing with identity conflicts and issues. Research has demonstrated that an informational processing style is positively associated with openness to ideas, values, and behavioral alternatives (Berzonsky, 1990; Berzonsky & Sullivan, 1992; Dollinger, 1995; Duriez & Soenens, 2006; Duriez, Soenens, & Beyers, 2004) and rational/analytical thinking (Berzonsky, 1990, 2008a; Berzonsky & Ferrari, 1996; Berzonsky & Sullivan, 1992). Consistent with the view that both rational and automatic reasoning play a role in self-regulation and the construction and reconstruction of a sense of identity (Berzonsky, 2004a; Epstein et al., 1996), an informational identity style is also positively associated with automatic, experientially based reasoning as indexed by the Epstein et al. faith in intuition measure of automatic processing (Berzonsky, 2004a, 2008a). Despite the advantages associated with engaging problems and conflicts in a relatively effortful and rational fashion, it is inefficient and counterproductive continually to seek novel information and reconsider decisions and problem resolutions. Consequently, information-oriented individuals do not constantly regulate their lives in a consciously willful, rational fashion—they also rely on relatively automatic, experientially based processing. Individuals with an informational style generally adopt a constructivist epistemological stance, which assumes that knowledge is relative and that people play a role in constructing who they are. They are aware that, although the truth of their constructions cannot be established with absolute certainty, intellectually defendable decisions about which views and options are better or more credible than others can be made relative to a particular set of rules, standards, and criteria (Berzonsky, 1993, 2004a; Caputi & Oades, 2001; Krettenauer, 2005). Such individuals are motivated to construct rational explanations to justify their choices and actions.

In line with the supposition that individuals with a diffuse-avoidant style operate in a hedonistic, situation-specific fashion (Berzonsky, 1990), diffuse-avoidance has been found to be negatively associated with rational processing (Berzonsky, 1990, 2008a), positively correlated with intuitive reasoning (Berzonsky, 2008a), and generally unrelated to automatic processing measured by need for cognitive closure (Berzonsky, 2007; Crocetti, Rubini, Berzonsky,

& Meeus, 2009; Soenens, Duriez, & Goossens, 2005). Epistemological views associated with a diffuse-avoidant style are less clear. In one investigation, diffuse-avoiders were found to endorse a worldview suggesting that their sense of identity was predetermined by fate or factors beyond their control (Berzonsky, 1994b). In another study, a diffuse-avoidant style was found to be associated with the fatalistic view that individuals cannot alter or control future events (Luyckx, Lens, Smits, & Goossens, 2010). Other findings suggest that individuals who score high on diffuse-avoidance view knowledge and the world as a chaotic multiplicity of options that offer little hope of legitimate objective certainty or rational judgment (Krettenauer, 2005). Given the multiplicity of options and alternatives they face, the decisions and actions of diffuse-avoiders seem to rest primarily on arbitrary personal wants, hedonistic desires, and feelings.

A normative identity style is associated with automatic processing as indexed by intuitive reasoning (Berzonsky, 2008a, 2008b). However, in contrast to their informational counterparts, individuals with high normative scores are unwavering in their efforts to conserve and preserve existing beliefs and truths (Berzonsky, 1990; Berzonsky & Sullivan, 1992; Dollinger, 1995). A normative style is also positively associated with a high need for cognitive closure (Webster & Kruglanski, 1994), which reflects cognitive impatience and a low tolerance for uncertainty (Berzonsky, 2008b; Crocetti et al., 2009; Soenens, Duriez, et al., 2005). A normative style is associated with a worldview that highlights environmental determinism and an absolutist view of truth (Berzonsky, 1993; Caputi & Oades, 2001; Krettenauer, 2005).

Empirical support for the hypothesized theoretical linkage between identity-processing styles and cognitive processing raises the question about whether identity-processing styles reflect differences in information-processing in general or whether the styles are uniquely associated with the processing of identity-relevant information. We now consider research on the extent to which both identity styles and general cognitive processes contribute to variation in measures of identity processes such as commitment, identity status, and the types of self-elements upon which individuals rely to define their identity.

Identity-Processing Styles, Cognitive Processing, and Identity Processes

The role that identity styles and general cognitive processes play in accounting for variation in measures of identity formation has been investigated in several studies framed in terms of a mediational model (Berzonsky, 2007, 2008a, 2008b). This mediational model postulates that, even though general cognitive processes and identity styles both directly contribute to variation in identity processes, linkages between rational and automatic cognitive processing, on the one hand, and various markers of identity formation, on the other hand, will at least in part be mediated by identity-processing styles. This mediational model was evaluated by a series of hierarchical regression analyses, controlling for sex and age. Measures of rational and automatic processing were entered on Step 2 to evaluate their contribution prior to controlling for the effects of identity style. The style variables were entered last to evaluate their hypothesized mediational role. A substantial reduction in the beta coefficients for the cognitive variables indicated mediation, with Sobel tests used to evaluate whether mediated effects were significant.

Berzonsky (2007, 2008a) examined the roles that rational reasoning (Cacioppo & Petty, 1982) and automatic/intuitive reasoning (Epstein et al., 1996) played in accounting for variation on measures of strength of identity commitment (Berzonsky, 2003), Marcia's identity achievement, foreclosure, moratorium, and diffusion identity statuses (Adams, 1999; Marcia, 1966) and collective identity (Luhtanen & Crocker, 1992). The Luhtanen and Crocker (1992) measure of collective identity focuses on the extent to which an individual's sense of identity reflects the social groups to which she or he belongs (e.g., "The social groups I belong to are unimportant to my sense of what kind of a person I am [reverse scored]"). In both studies, rational

and intuitive processing accounted for significant variation in strength of identity commitment and identity achievement before the effects of style were controlled. All three styles uniquely predicted strength of commitment, and both the informational and normative styles were uniquely associated with identity achievement. Evidence for the mediational hypothesis was obtained in all the analyses. All of the significant paths from rational and intuitive processing to commitment and achievement were at least partially mediated by the informational style. The normative style partially mediated the significant relationship between intuitive processing and collective identity (Berzonsky, 2008a) and completely mediated the linkage from intuitive processing to identity foreclosure (Berzonsky, 2007). Neither cognitive processing variable accounted for significant variation in diffusion or moratorium status scores. The diffuse-avoidant and informational styles uniquely explained significant variation in both diffusion and moratorium scores. Diffuse-avoidance was positively associated with both diffusion and moratorium, whereas the informational style was negatively associated with diffusion but positively with moratorium.

The findings are consistent with the view that identity styles reflect differences in the processing of information relevant to identity formation. The style variables accounted for significant variation on all of the measures of identity formation after the effects of general cognitive processing had been controlled. Moreover, in all the analyses where cognitive processes had a direct effect, those effects were at least partially mediated by identity style. Finally, supplemental analyses indicated that the style variables accounted for a greater amount of unique variation than the cognitive variables in all of the measures of identity formation (Berzonsky, 2007, 2008a).

Identity-Processing Styles, Cognitive Processing, and Identity Content

Another approach to investigating the role that identity styles and cognitive processes play in identity formation is to examine the types of self-relevant information or self-elements individuals utilize to form their sense of identity (Cheek, 1988). In two studies, Berzonsky (2008b) investigated whether identity-processing styles mediated the relationships between cognitive processes and the types of self-attributes on which individuals' sense of identity was based: (a) personal identity attributes such as "personal values" and "self-knowledge;" (b) social identity components including "reputation" and "impressions made on others;" and (c) collective identity elements such as "religion" and "family." The analyses—controlling for sex and age—were based on the mediational model described above. The same cognitive and style measures used in Berzonsky (2007, 2008a) were used in Study 1. Need for cognitive closure (Webster & Kruglanski, 1994) was used to assess automatic processing in Study 2. Individuals with a high need for closure are intolerant of ambiguity, cognitively impatient, reluctant to suspend judgment, and closed minded; they do not expend a lot of cognitive effort considering alternatives or processing new information (Webster & Kruglanski, 1994). The use of personal identity attributes was associated with both rational and intuitive processing, whereas the utilization of collective identity elements was more exclusively automatic (as operationalized by both need for closure and intuitive processing). Reliance on social identity components was negatively associated with rational processing and positively associated with need for closure. Individuals who consider identity issues in a rational, informed way were likely to highlight personal aspects of their identity, whereas those who utilized more automatic processing relied on social or collective aspects of who they are. In all the analyses, the styles accounted for a greater amount of the variation than the cognitive variables in the types of self-elements the participants used to ground their sense of identity, supporting the view that the processing styles focus on identity-relevant information (Berzonsky, 1990). Further, identity styles mediated most of the significant relationships between the cognitive variables and the identity element scores. In both studies, an informational

style mediated the positive path from rational processing to personal identity. In Study 1, both the normative and diffuse-avoidant styles mediated the negative path from rational processing to social identity; and in Study 2 the normative style mediated positive relationships between need for closure and both social and collective identity. Consistent with the view that diffuse-avoidance reflects a situational approach to identity considerations (Berzonsky, 1990), this style was directly positively associated with social identity in both studies.

Identity-Processing Style and Self-Knowledge

The process of identity formation involves more than a mentally effortful exploration of identity-relevant options and alternatives; it involves turning attention inward to analyze and become aware of the views, goals, standards, values, etc., that constitute the inner self (Berzonsky & Barclay, 1981; Erikson, 1964). Some early research indicated that an informational processing style was positively associated with private self-consciousness and introspection (Berzonsky, 1990; Berzonsky & Sullivan, 1992). The tendency to focus on oneself, however, has been found to have a dark (e.g., maladjustment, anxiety, depressive reactions, neuroticism, rumination, and psychopathology) as well as beneficial (e.g., accurate self-insight, a well-developed self-structure, and definite personal standards) side (Buss, 1980; Ingram, 1990; Trapnell & Campbell, 1999). Evidence indicates that Buss' (1980) measure of private self-consciousness may consist of two factors. One involves a maladaptive excessive preoccupation about negative evaluations and expectations of others; whereas the other is a more adaptive state of internal self-awareness, which is associated with a clear sense of identity and positive self-regard (Creed & Funder, 1998; Piliavin & Charng, 1988). Evidence also indicates that people may reflect on themselves for different reasons. Self-reflection motivated by an epistemic interest to gain insight about intrapersonal states and standards should be constructive and adaptive (Franzoi, Davis, & Markwiese, 1990; Trapnell & Campbell, 1999). In contrast, reflection motivated by anxiety or perceived threats to the self (i.e., ruminative self-attention) is more dysfunctional (Luyckx, Soenens, Goossens, Beckx, & Wouters, 2008; Trapnell & Campbell, 1999).

Berzonsky and Luyckx (2008) investigated relationships among identity-processing styles, ruminative and epistemic self-reflective processes, and an awareness of internal states. A series of regression analyses was conducted in which each identity style served as the dependent variable and age, sex, and the other two style scales were controlled. Both epistemic self-reflection and internal state awareness were found to uniquely account for significant variation in informational style scores. Individuals with high informational scores reported engaging in active self-reflection in order to better understand their inner thoughts, feelings, and standards. Ruminative self-attention was uniquely positively associated with a normative as well as a diffuse-avoidant style. A normative style was not associated with epistemic self-reflection or internal state awareness. Even though individuals with high normative scores indicated little interest in reflecting on their inner thoughts, feelings, and standards, they did report a high level of ruminative self-preoccupation, which may reflect concern with the social appropriateness of their actions. Participants with high diffuse-avoidance scores also displayed little interest in reflecting upon and understanding themselves, which may provide a strategic way to evade or obscure potentially negative self-diagnostic information. Indeed, diffuse-avoidance was negatively associated with awareness of inner states and views (Berzonsky & Luyckx, 2008).

These results are consistent with previous findings that diffuse-avoidance generally is associated with negative affective responses including anxiety, neuroticism, and depressive reactions (Berzonsky, 1990, 2003; Dollinger, 1995; Nurmi, Berzonsky, Tammi, & Kinney, 1997), and that an informational approach tends to show opposite relations with affective responses. However, Berzonsky and Kuk (2000)

unexpectedly found that, even though an informational style was not directly associated with depressive reactions, when psychosocial resources—i.e., self-regulation, agency, and commitment—were statistically controlled, a reliable positive relationship between an informational style and depressive reactions emerged. The same pattern of results was found in an 8-month longitudinal follow-up (Berzonsky & Kuk, 2000).

One possible explanation of these findings is that, in the absence of clear self-standards and adequate self-regulatory resources, the informed processing of self-relevant information may devolve into a helpless state of personal rumination (Nolen-Hoeksema, 1991; Pyszczynski & Greenberg, 1987). Some individuals with high informational scores may become so obsessed with the problems and negative feelings they are experiencing that they are unable to focus on effectively attempting to solve those problems. Such a pattern may explain the positive relationship between an informational style and depressive reactions once psychosocial resources were held constant. An alternative explanation is that, as mentioned previously, adaptive behavior is not a function of internal standards or goal states alone; it also requires a willingness to encode negative feedback from one's behavior and actions and to make relevant adjustments. Tendencies to personalize negative feedback would short-circuit the cycle. Being motivated to reflect on and gain insight about inner states and standards, consequently, would be instrumental to personal effectiveness and self-regulation. It is possible that, when Berzonsky and Kuk (2000) controlled for psychosocial resources, the variance that these resources shared with constructive self-reflective tendencies and self-insight may have also been removed. However, Berzonsky and Kuk (2000) did not include measures of adaptive or maladaptive self-reflection.

To evaluate some of these alternative possibilities, Berzonsky, Dunkel, and Papini (2009) administered a battery of measures to over 500 participants, including: identity style (Berzonsky, 1992a), epistemic self-reflection and rumination (Trapnell & Campbell, 1999), need for self-knowledge (Franzoi et al., 1990), internal state awareness (Buss, 1980), self-regulation (Berzonsky, 2005b), personal agency (Snyder et al., 1991), identity commitment (Berzonsky, 2003), and depressive reactions (Beck, Rush, Shaw, & Emery, 1979). Thus, in this investigation, unlike the previous studies, measures of both psychosocial resources and self-reflective processes were included. Informational scores were positively correlated with self-reflection, need for self-knowledge, internal-state awareness, and all three psychosocial resources: self-regulation, agency, and commitment. A regression analysis indicated that self-reflection, self-regulation, agency, commitment, and rumination were uniquely associated with the informational style (total $R^2 = 0.43$, $p < 0.01$). Further hierarchical analyses revealed that even though the zero-order correlation between rumination and informational scores was not significant, when the effects of self-regulation, agency, and commitment were controlled, rumination accounted for significant variation in informational scores ($\beta = 0.08$, $p < 0.05$). Also, supplemental analyses revealed that the contributions of need for self-knowledge and inner-state awareness to variation in informational scores were completely mediated by the psychosocial-resources variables.

The findings are consistent with previous research in that the informational style was positively associated with effective psychosocial resources (Berzonsky & Kuk, 2000) and self-reflection and self-insight (Berzonsky & Luyckx, 2008). Additionally, self-rumination was found to be positively associated with an informational style but only after the contribution of psychosocial resources was controlled. Consequently, the findings indicate that the processing of self-relevant information may not always promote constructive self-insight and may, at least to some extent, devolve into maladaptive ruminative self-preoccupation in the absence of adaptive psychosocial resources.

The main objective of the Berzonsky et al. (2009) study was to attempt to evaluate some explanations about which variables may suppress a positive relationship between an informational style and depressive reactions. Depressive

symptom scores (Beck et al., 1979) were regressed hierarchically, in order, on the identity style, self-attention, self-insight, and psychosocial variables. The unpublished findings are presented in Table 3.1.

Age and sex, entered first as control variables, are not included. On Step 2, the normative (negatively) and diffuse-avoidant (positively) styles uniquely contributed to the prediction of scores ($\Delta R^2 = 0.14$, $p < 0.01$). Consistent with the bivariate correlations (presented in the last column in Table 3.1), an informational style was not associated with depressive reactions. Rumination (positive) and self-reflection (negative) were significant predictors on Step 3: beta coefficients for the style variables remained relatively stable ($\Delta R^2 = 0.20$, $p < 0.01$). Need for self-knowledge and self-awareness were both negatively associated with depressive scores on the next step ($\Delta R^2 = 0.02$, $p < 0.01$). When they were added, however, a significant positive contribution of the informational style to depressive symptoms emerged ($\beta = 0.09$, $p < 0.05$). Further, the contribution of self-reflection was no longer significant, suggesting that the negative relationship between self-reflection and depression was mediated by knowledge about the self. Thus, epistemic self-reflection may be negatively associated with depressive reactions when it contributes to self-insight and self-awareness. When the psychosocial resources were added on the final step ($\Delta R^2 = 0.10$, $p < 0.01$), the positive standardized regression coefficient for the informational style doubled (0.09–0.19). In addition, the coefficients for self-knowledge and self-awareness were no longer significant. Thus, not only did the agency and self-regulatory variables directly contribute to variance in depressive reactions, they also mediated the negative relationships between self-knowledge and self-awareness and depressive reactions.

These findings suggest that the processing of identity-relevant information does not necessarily directly promote personal adjustment and well-being, and that such processing may be detrimental when it does not contribute to self-insight and effective self-regulation. To evaluate whether rumination mediated the positive relationship between an informational style and depressive reactions that was found after the psychosocial variables were controlled, a supplemental analysis was conducted with rumination entered after

Table 3.1 Hierarchical regression of depressive reactions on identity style, self-reflective, self-insight, and psychosocial variables (Berzonsky et al., 2009)

	Step 2	Step3	Step 4	Step 5	
Predictor variables	β	β	β	β	r
Informational style	0.04	0.05	0.09*	0.19**	–0.07
Normative style	–0.27**	–0.23**	–0.22**	–0.15**	–0.30**
Diffuse-avoidance	0.24**	0.22**	0.20**	0.12**	0.27**
Self-reflection		–0.12*	–0.04	–0.07	0.01
Self-rumination		0.46**	0.46**	0.36**	0.47**
Self-knowledge			–0.09*	–0.01	–0.10*
Internal awareness			–0.13**	–0.03	–0.19**
Commitment				0.02	–0.29**
Agency				–0.37**	–0.54**
Self-regulation				–0.09*	–0.38**
Change in R^2	0.14**	0.20**	0.02**	0.10**	
Total adjusted R^2	0.14**	0.34**	0.36**	0. 46**	

Note: Regression coefficients for sex and age, controlled on Step 1, are not presented. Correlation coefficients between depressive reactions and the predictor variables are presented in the last column (r).
*p <0.05, **p <0.01.

all of the other variables. In this analysis, the positive standardized regression coefficient for the informational style was only reduced about 17% (from 0.23 to 0.19), providing limited support for mediation. Future research needs to establish the reliability of the suppressive role the psychosocial variables were found to play and to attempt to further clarify why an informational style was positively associated with depressive reactions after these variables were controlled.

Gender Differences in Identity-Processing Style

In a number of studies, men have been found to score higher on diffuse-avoidance compared to their female counterparts (e.g., Berzonsky, 1992b, 2008a; Berzonsky & Kinney, 2008; Soenens, Berzonsky, Vansteenkiste, Beyers, & Goossens, 2005). It is not clear why this relationship occurs, but the contributions of gender-role stereotypes and differences in parental processes should be considered (Berzonsky & Kinney, 2008). Although other gender differences have been reported in some investigations—for example, Berzonsky (2008a) found that female participants scored higher than males on informational scores and Soenens, Berzonsky, et al. (2005) found that females had higher normative scores—effect sizes were relatively small, and such findings tend to be isolated rather than systematic. The more important question is: Does gender qualify relationships between identity styles and other variables? The answer, for the most part, appears to be no.

Cultural Differences in Identity-Processing Styles

Although, as noted earlier, the English or translated versions of the *Identity Style Inventory* have been used in numerous countries, few cross-cultural or cross-national comparisons of scores on the style measures have been published. In general, in those studies that have been published, the relationships between style and other variables do not appear to be moderated by culture or country (e.g., Berzonsky et al., 2003; Crocetti et al., 2009; Krettenauer, 2005; Soenens, Duriez, et al., 2005). Schwartz, Côté, and Arnett (2005) did compare the style scores of three self-identified ethnic groups of students in an American university: Hispanics, non-Hispanic Blacks, and non-Hispanic Whites. The majority of the students in each group were born in the United States. Hispanic and non-Hispanic Black students had significantly higher normative scores than their non-Hispanic White counterparts; no significant ethnic differences on the other style scales were found. The structure of the factors on which each style loaded was stable across the three ethnic groups (see also Schwartz & Montgomery, 2002).

These limited findings suggest cross-cultural generalizability of identity-processing styles. However, these studies have been conducted within academic contexts—usually within university settings, where rational, informed reasoning is valued and encouraged. Whether the same pattern of relationships would be obtained within non-academic contexts is a question that has yet to be addressed.

The Development of Identity Style

Although the effect sizes are quite modest, there is some evidence for developmental changes in identity style scores. In a recent longitudinal study of early adolescents (age 13 at baseline), Berzonsky, Klimstra, Keijsers, and Meeus (2009) found significant linear increases in informational scores and decreases in normative scores over 4 years. Likewise, Luyckx et al. (2010) found that the informational scores of university students increased significantly over a 4-month interval. The possibility that familial processes and core personality traits such as the Big Five factors (Caspi, 1998) may contribute to the development of identity styles has received some consideration—as reviewed below.

Identity Style and Parental Processes

Several studies have investigated associations between parenting processes and identity styles. A diffuse-avoidant style has been found to be associated with parental practices that provide limited guidance and nurturance, such as permissiveness (Berzonsky, 2004b), negligible behavioral control (Smits et al., 2008), low levels of emotional support and expressiveness (Adams, Berzonsky, & Keating, 2006; Dunkel, Papini, & Berzonsky, 2008), and minimal communication and disclosure (Berzonsky, Branje, & Meeus, 2007). In contrast, a normative style generally is linked to more directive and supportive parental practices such as authoritative parenting (Berzonsky, 2004b), open communication (Berzonsky et al., 2007), family cohesiveness (Adams et al., 2006), and emotional closeness (Dunkel et al., 2008; Smits et al., 2008). The pattern of parental processes associated with an informational style, however, has been less consistent. Although Berzonsky (2004b) found that supportive, reason-based authoritative parental practices were associated with an informational style, other investigators have found an informational style to be related to more demanding, less rational practices such as manipulative psychological control (Smits et al., 2008) and parental solicitation of information (Berzonsky et al., 2007). In all of these studies, parental practices and attitudes were self-reported by the participants. It is possible that individuals with a normative style who identify strongly with their parents tend to perceive them in more positive light than individuals with an informational style, who may be more concerned with differentiating their own views from those of their parents. Assessing parental practices via multiple informants may provide more insight into this issue. It should be noted that a normative style is positively linked with rigid, authoritarian beliefs (Duriez & Soenens, 2006; Soenens, Duriez, et al., 2005), which seems inconsistent with the pattern of supportive parental correlates that have been found. Possible factors that moderate the relationship between a normative style and parenting processes need to be investigated, such as the type of behaviors and reasoning strategies the parents model.

Identity Style and Personality Traits

Consistent links between identity styles and the Big Five personality traits (see Caspi, 1998) have also been found. Openness to experience is positively correlated with the informational style and negatively with the normative style (Berzonsky & Sullivan, 1992; Dollinger, 1995; Dollinger & Dollinger, 1997; Duriez et al., 2004; Irvine & Strahan, 1997). Conscientiousness is positively linked with the normative style and negatively with diffuse-avoidance (Dollinger, 1995; Dollinger & Dollinger, 1997; Dunkel et al., 2008; Duriez & Soenens, 2006; Duriez et al., 2004). Positive linkages between conscientiousness and an informational style and between neuroticism and diffuse-avoidance have also been found (Dollinger, 1995; Dollinger & Dollinger, 1997; Irvine & Strahan, 1997). Given that twin studies indicate that variation in these personality traits is highly heritable (Jang, Livesley, & Vernon, 1996; Lochlin, McCrae, Costa, & John, 1998), the possibility that genetic variation may play a role in the identity style that individuals adopt should be considered. Of course, heritability estimates indicate the percentage of trait variance explained by genetic factors given existing environmental conditions; they do not indicate how much of the variance would be controlled by genetic factors under a *different* set of environmental conditions.

Self-Regulatory Processes

According to my social cognitive model, to function at optimal levels, individuals need to effectively regulate and modify their internal processes and overt actions (Baumeister, Heatherton, & Tice, 1994). The self-theory provides the cognitive basis for understanding and interpreting self-relevant information, and it contains scripts and operative schemes for dealing with conflicts and environmental demands and the standards

and values against which information about the efficacy of adaptive strategies will be evaluated (Berzonsky, 1988, 1993). Adaptive efforts that fall short of a standard or desired state may create dissonance, or what Piaget referred to as disequilibration, which may motivate accommodative efforts to revise aspects of the self-theory or identity structure (see also Kerpelman et al., 1997; Whitbourne, 1986). This regulatory cycle may be short-circuited in several ways.

Commitments and Self-Standards

Roy Baumeister and his colleagues (Baumeister & Heatherton, 1996; Baumeister et al., 1994) have indicated that self-regulation failures can occur for numerous reasons, including the absence of clear and stable self-standards. Individuals with a normative style have internalized the values, goals, and prescriptions of significant others, whereas those with an informational style may or may not have formed strong commitments: they may be currently engaged in the process of exploring different values, goals, and standards. Firm, strong goal commitments and standards are associated with the informational, and especially normative, styles, whereas diffuse-avoiders have weak commitments and standards (Berzonsky, 1989a, 1990, 2003; Berzonsky et al., 2003; Berzonsky & Luyckx, 2008). Commitments and convictions may provide people with a sense of purpose and direction and facilitate regulation by providing a referent for evaluating feedback; and their absence is likely to undercut regulatory effectiveness.

Individuals with different identity styles may also adopt different self-standpoints (Higgins, 1987) when considering themselves and their regulatory efforts. Individuals with an informational style are likely to highlight their own self-perspective; those with a normative style would adhere to the perspective of significant others (Berzonsky, 1994a). Both of these perspectives have an internal locus and should facilitate regulatory efforts. In contrast, diffuse-avoiders are more likely to adopt a standpoint dictated by hedonistic concerns and to look to others for approval and guides about how to act and who to be in different situations, which undermines the effectiveness of regulatory efforts vis-à-vis long-term goals (Berzonsky, 2004a).

Self-Evaluative Processing

Biased self-evaluative processing may also impede self-regulatory efforts (Baumeister & Heatherton, 1996). Individuals with a normative style have a strong need for cognitive closure and selectively seek confirmatory information when evaluating hypotheses about themselves or about the world around them (Berzonsky, 1999; Duriez & Soenens, 2006; Soenens, Duriez, et al., 2005). As dogmatic self-theorists, their reasoning is motivated by a desire to reach conclusions dictated by pre-existing values and beliefs. Additionally, discrepant information that threatens one's self-views can be misinterpreted or dealt with defensively. Individuals with an informational style are relatively more motivated to process and evaluate evidence before drawing inferences and conclusions. As scientific self-theorists, they consider self-views to be hypothetical and strive to consider and evaluate plausible alternative explanations before drawing informed conclusions (Berzonsky, 1988). Individuals with a diffuse-avoidant style attempt to avoid or obscure potentially negative self-diagnostic feedback. Evidence reveals that the three identity styles are associated with different patterns of defensive mechanisms (Berzonsky & Kinney, 2008). Individuals with high informational scores rely on complex cognitive maneuvers that enable them to focus on responding adaptively by reinterpreting and downplaying the personal significance of potentially self-threatening information. Those with high normative scores rely on more maladaptive mechanisms that distort or deny self-discrepant feedback. Diffuse-avoidance is associated with relatively immature defensive maneuvers that direct blame and hostility outward toward others. Such maneuvers not only minimize personal responsibility, but also thwart problem-solving efforts and may reflect attempts

to at least publically preserve or bolster self-esteem (Berzonsky & Kinney, 2008).

Overriding Impulsive Reactions

Regulation may also break down when people are unwilling or unable to exercise self-control (Baumeister et al., 1994). Effective self-regulation requires the ability and motivation to override impulses and emotional responses that are likely to lead to undesirable outcomes. As Baumeister and Heatherton (1996, p. 2) note, "The problem is not that people have impulses; it is that they act on them." Informational and normative styles are associated with characteristics and resources such as self-discipline, frustration tolerance, and conscientiousness (Berzonsky, 2005b; Dollinger, 1995), which are likely to enable them to effectively control and regulate their behavior in response to environmental demands and self-relevant feedback. However, an informational (but not normative) style is also positively associated with emotional and academic autonomy (Berzonsky & Kuk, 2005), self-efficacy (Hejazi, Shahraray, Farsinejad, & Asgary, 2009), emotional intelligence (Seaton & Beaumont, 2008), self-regulated learning (Jakubowski & Dembo, 2004), and an autonomous causality orientation (Soenens, Berzonsky, et al., 2005). Willpower (or impulse control) is also facilitated by deliberate cognitive control that shifts attention away from immediate temptations or enables one to override impulses by refocusing on long-term consequences (Metcalfe & Mischel, 1999). The regulatory efforts of individuals with an informational style tend to be self-determined; those with a normative style are more likely to be controlled by introjected standards and goals of significant others (Berzonsky, 2003; Soenens, Berzonsky, et al., 2005; Soenens & Vansteenkiste, Chapter 17, this volume). In well-structured situations characterized by relatively stable demands and problems, both normative and personally informed commitments and standards should enable individuals to be relatively effective and successful. Differences may be more marked, however, in situations characterized by change and diversity where more flexible, resourceful, self-reliant behaviors and efforts are necessary.

Diffuse-avoiders, in contrast, are less likely to possess the resources to successfully regulate their behavior in either type of situation. They tend to be impulsive, hedonistic, and self-centered, and they have an impersonal causality orientation—believing that they are ineffective with minimal personal control over what happens to them (Berzonsky & Kuk, 2005; Soenens, Berzonsky, et al., 2005). Of course, emotional reactions do not necessarily always interfere with self-regulation. Guilt, for instance, may facilitate self-control by signaling the violation of personal standards and motivating attempts to redress the harm that occurred (Baumeister & Heatherton, 1996). Tangney and her colleagues have found that adaptive guilt reactions, as measured by the Test of Self-Conscious Affect (TOSCA), are associated with perspective taking, empathy, efforts to deal with anger-provoking situations constructively by discussing corrective actions, and a tendency to engage in cognitive reappraisals about the role self and others may have played in initiating the situation (Tangney, 1991; Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996). An informational style is associated with guilt reactions as measured by the TOSCA, whereas a diffuse-avoidant style is correlated with shame reactions that are associated with feelings of being worthless and ineffective and maladaptive ways of handling anger (Lutwak et al., 1998). Consistent with the view that diffuse-avoidance reflects ineffective regulatory processes, research indicates that, compared to their informational and normative counterparts, diffuse-avoiders experience more problems, including higher levels of depression and neuroticism (Dollinger, 1995; Nurmi et al., 1997), more conduct disorders and delinquency (Adams et al., 2001; Adams, Munro, Munro, Doherty-Poirer, & Edwards, 2005; White & Jones, 1996), disordered eating (Wheeler, Adams, & Keating, 2001), and greater use of illegal drugs and alcohol (Jones, Ross, & Hartmann, 1992; White, Montgomery, Wampler, & Fischer, 2003).

Identity-Processing Style and Self-Continuity

A sense of identity enables individuals to maintain a sense of coherent self-unity over time and space despite the physical, social, and psychological changes they experience (Erikson, 1964). People receive optical, acoustical, and kinetic information that objectively specifies their location in and interactions with the world (Neisser, 1994). Objective stimulus information, however, only indicates where people are and what they are doing in the present, not what they have done in the past. Mentally representing events and experiences in the form of, for instance, schemas and episodic memories (Tulving, 1972) enables people to recapture the past. Distinguishing representations based on past information from those based on current information provides a basis for realizing that one's existence transcends the present: "I am the person who did that." Of course, neither information nor memories speak for themselves; their meaning and significance is constructed and reconstructed within a person's broader self-theory. The cognitive integration and transformation of representations provides a basis for envisioning future possibilities and acting with foresight: the hypothetical meta-representations or second-order cognitive operations that emerge make it possible to think in a goal-oriented fashion and hypothesize that "I am the person who will do that" (see, for example, Boyer, 2008; Conway, 2003). Having the cognitive wherewithal to recapture the past and to mentally envision future goals and outcomes is liberating in that it enables individuals to cognitively entertain possibilities and alternatives not presently being experienced. However, especially during adolescence, these advanced cognitive resources, coupled with other pubertal, social, and psychological changes, can undermine the epistemological foundation upon which existing beliefs, goals, and self-views have been built (Chandler, 1987). Not only do pubertal changes usher in the need to revise and modify the body image one has taken for granted, but advances in cognitive reasoning may enable youth to consider views, life options, and value systems other than the ones they have grown up with and accepted without question. These advances in cognitive resources may undermine the certainty with which previous views and values have been held and underscore the relativistic and subjective nature of making life choices and forming commitments. Such epistemological crises may destabilize their self-theory and create the challenge of restructuring it in an effort to maintain a sense of personal sameness and persistence over time.

Marcia (2003) proposed that identity-processing styles may be associated with different strategies for warranting a sense of self-continuity (Chandler et al., 2003). Although direct linkages with Chandler's strategies have not been investigated, identity-processing styles are associated with structural differences in self-theories (Berzonsky, 1989b; Berzonsky & Adams, 1999; Berzonsky, Rice, & Neimeyer, 1990; Dunkel, 2005). An informed, self-exploratory approach to identity formation is associated with a self-theory composed of well-integrated but differentiated self-constructs, which should provide a flexible sense of self-unity and wholeness. Diffuse-avoidance is associated with poorly integrated personal constructs that appear to reflect a fragmented sense of self. Lacking a stable and coherent sense of self, diffuse-avoiders look outward to others and social cues to define who they are. A normative approach to identity formation is associated with an integrated self-theory—one that consists of rigidly organized self-constructs that are steadfastly conserved. Internalized collective elements—such as religious or nationalistic views—provide a normative sense of self that persists over time (see also Berzonsky, 1994a, 2005b).

Concluding Comments

A social-cognitive model of identity is presented in this chapter. People are viewed as different types of self-theorists who rely on different cognitive processes to encode self-relevant information and to construct and reconstruct or maintain a sense of identity. An extensive review of empirical research

has indicated that an informational processing style is associated with both rational and automatic processing, whereas a normative style is more exclusively automatic. It is possible that the automatic processing associated with the normative and informational style occurs for different reasons. The normative style may primarily reflect a "mindless" process (Langer, 1989) of prematurely internalizing beliefs and commitments without deliberate conscious effort (see Berzonsky, 1988). The automaticity associated with an informational style, in contrast, may mainly involve views and commitments originally formed via mentally effortful reasoning that subsequently became automatic and required less effort and resources as they are repeatedly accessed and utilized. A diffuse-avoidant style is negatively associated with rational processing; it appears to be driven mainly by external demands and consequences. Evidence indicates that individuals with high informational scores tend to be more effective along a number of social, cognitive, and personality dimensions than their diffuse-avoidant counterparts, whereas people with high normative scores generally fall somewhere in between.

Identity-processing styles, however, do not appear to be inherently good or bad. Personal effectiveness is considered to be an interactive function of individuals and environmental contexts; the functional utility of a particular style would appear to depend on how well it fits the demands and consequences that individuals face. In relatively stable, tradition-oriented contexts, a normative style appears to be quite functional. In technologically advanced Western cultures characterized by relatively rapid change and transition, an informational style may be more adaptive than a normative style. Some have argued that in a relativistic, postmodern world, a diffuse-avoidant—or at least "fluid"—identity orientation may maximize adaptive flexibility (see Gergen, 1991). To the extent that diffuse-avoidance is associated with such "flexibility," most likely its effectiveness will be moderated by an individual's level of ability and skills such as, for instance, general intelligence or verbal facility (Berzonsky & Ferrari, 2009). Of course, demands and problems within cultural contexts are not homogeneous, and a normative style has been found to be relatively adaptive for at least some individuals within modern Western cultures on dimensions such as career planning, educational involvement, and self-regulation (Berzonsky & Kuk, 2000, 2005); self-esteem and self-worth (Beaumont & Zukanovic, 2005; Phillips & Pittman, 2007); and emotional intelligence (Seaton & Beaumont, 2008). Given the available evidence, however, it appears that an informational style may generally provide the best fit for coping with the challenges and benefiting from the opportunities afforded by the institutionalized moratoria made possible by attendance in a university context. It remains to be determined whether the same is true outside of the university context.

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