

---

## Processes of Personal Identity Formation and Evaluation

# 4

Koen Luyckx, Seth J. Schwartz, Luc Goossens,  
Wim Beyers, and Lies Missotten

---

### Abstract

In the present chapter, we propose a process-oriented model suited to map personal identity development across different phases of the lifespan and in different domains of identity. Primarily inspired by Marcia's (1966) identity status paradigm, this model unpacks the dimensions of exploration and commitment into five distinctive but interrelated identity dimensions: three forms of exploration (ruminative, in-breadth, and in-depth) and two forms of commitment (commitment making and identification). In doing so, the model focuses on both the development and the evaluation of one's personal identity and enables researchers to distinguish between more and less adaptive identity strategies. Special attention is paid to developmental issues, antecedents, and concomitants of this identity model and to how the different dimensions of the model—and the statuses derived based on this model—are related to psychosocial (self-esteem, depressive symptoms, and anxiety) and health (illness adaptation, coping) outcomes in non-clinical and clinical populations. Suggestions for individually and contextually based intervention strategies are provided.

The present chapter focuses on a process-oriented approach to personal identity development (Luyckx, Goossens, & Soenens, 2006), strongly grounded in Marcia's (1966) seminal identity status paradigm (see Kroger & Marcia, Chapter 2, this volume) and in extensions of this paradigm. The present chapter consists of four

general sections. First, we outline the identity status paradigm and some neo-Eriksonian models that have been introduced as extensions of this paradigm (Lichtwarck-Aschoff, van Geert, Bosma, & Kunnen, 2008; Schwartz, 2001). We particularly attend to integrative theoretical viewpoints that bring together various neo-Eriksonian perspectives on identity and that served as important sources of inspiration for the model we developed. Second, we introduce an integrative model of identity development, focusing on the processes involved in both the formation and the evaluation of identity commitments.

---

K. Luyckx (✉)  
Department of Psychology, Catholic University of  
Leuven, Leuven, Belgium  
e-mail: koen.luyckx@psy.kuleuven.be

The developmental trajectories of the constituent identity dimensions throughout the adolescent and emerging adult years are outlined. Important antecedents, correlates, and consequences of the identity dimensions are discussed. Third, in an attempt to explain the paradoxical association of identity exploration with both positive and maladaptive psychosocial outcomes, we distinguish between reflective and ruminative components of exploration. Based on this new extended identity model, we empirically derive identity statuses, further extending Marcia's identity status paradigm. We describe ways in which these identity dimensions and statuses are related to psychosocial and health outcomes in normative (high-school students, college students, and working emerging adults) and clinical populations (such as individuals with a chronic illness). Finally, some suggestions for interventions are provided with a focus on promoting adaptive exploratory strategies and encouraging the formation of self-endorsed commitments (Schwartz, Kurtines, & Montgomery, 2005).

---

## The Identity Status Paradigm and Its Extensions

### Erikson and Marcia as Founding Fathers

The model of identity development proposed in this chapter is grounded in Erikson's (1950, 1968) and Marcia's (1966) work (Kroger & Marcia, Chapter 2, this volume). Erikson's seminal theory emphasizes identity development as the most prominent developmental task of adolescence, and identity maintenance and revision as an important developmental task during adulthood (cf. Kroger, 2007). Erikson conceptualized identity as a multidimensional construct tapping into cognitive, moral, cultural, and social aspects and encompassing different levels of analysis (including personal and social dimensions). For Erikson, identity refers primarily to a subjective feeling of sameness and continuity across time and across contexts, and it is best represented by a single bipolar dimension ranging from identity synthesis to identity confusion. *Identity synthesis*

refers to a reworking of childhood identifications into a larger and self-determined set of ideals, values, and goals, whereas *identity confusion* represents an inability to develop a workable set of goals and commitments on which to base an adult identity (Schwartz, 2001). Importantly, Erikson stressed that identity is never "final" and continues to develop through the lifespan. Due to both normative developmental changes and transactions with the environment, one's identity is subject to change and transformation. This core assumption of identity development as an ongoing psychosocial task has guided the identity model that we (Luyckx, Goossens, & Soenens, 2006) have developed.

Although a number of writers attempted to operationalize Erikson's theoretical and clinical writings for empirical research, the identity status paradigm (Kroger & Marcia, Chapter 2, this volume; Marcia, 1966, 1980) was the first neo-Eriksonian identity model to inspire a significant research literature. Indeed, many personal identity researchers base themselves on the identity status paradigm—or on other models that expand in significant ways on the concept of identity status (Schwartz, 2001). As explained in Kroger and Marcia (Chapter 2, this volume), Marcia's primary objective was to identify key identity processes described by Erikson and to operationalize them for empirical research. By targeting the dimensions of exploration (consideration of multiple identity alternatives) and commitment (making a choice to adhere to one or more of the alternatives considered)—and by specifying how they intersect to derive identity statuses—Marcia attempted to identify psychological or behavioral markers of an underlying identity structure.

Each identity status represents a combination of levels (present or absent) of exploration and commitment. Both achievement and foreclosure are characterized by the presence of identity commitments but differ in the degree to which the person has explored prior to enacting the commitment. Achievement is characterized by commitments following a period of exploration, whereas foreclosure is characterized by commitments enacted without much prior exploration. Both moratorium and diffusion are

characterized by the relative absence of commitment but differ in terms of whether the person is engaging in systematic identity exploration. Individuals in moratorium are currently exploring potential life choices, whereas diffused individuals have engaged in little or no systematic identity exploration. Abundant research, mostly cross-sectional, has focused on the presumed antecedents, correlates, and outcomes of these statuses (Kroger & Marcia, [Chapter 2](#), this volume; Marcia, 1993).

### Influential Neo-Eriksonian Extensions

Since the mid-1980s, a number of authors have proposed models that expand on the identity statuses (Schwartz, 2001). Some of these perspectives are reviewed in this book (e.g., Berzonsky, [Chapter 3](#), this volume; and Waterman, [Chapter 16](#), this volume). Schwartz (2001) and Lichtwarck-Aschoff et al. (2008) have reviewed these different perspectives and have organized them into logical groupings. In the next sections, rather than trying to classify neo-Eriksonian models into groupings, we briefly describe some of these different neo-Eriksonian perspectives and explain how they inspired us to develop an integrated process-oriented model. More specifically, three models will be briefly discussed: Grotevant's (1987) process model, Kerpelman's (Kerpelman, Pittman, & Lamke, 1997) identity control model, and Bosma and Kunnen's (2001) transactional model.

First, Grotevant (1987) focused on exploration—which he defined as “problem-solving behavior aimed at eliciting information about oneself or one’s environment in order to make a decision about an important life choice” (p. 204)—as the process underlying identity development (see Berzonsky, [Chapter 3](#), this volume, for similar ideas). As such, he framed exploration at the heart of identity work in late adolescence and emerging adulthood. Identity exploration, as conceptualized by Grotevant, involves five interrelated factors that interact over time as the individual moves toward making commitments: (a) initial expectations and beliefs

that guide and shape the exploration process; (b) hypothesis-testing behaviors conducted by the individual; (c) the degree of energy and affective investment in existing commitments (which is hypothesized to constrain exploration); (d) the degree to which competing alternatives are judged as attractive, or the presence of counterbalancing factors that discourage further exploration (such as a romantic relationship that may lead one to decline opportunities to explore careers in faraway places); and (e) interim evaluations of one’s progress, as a way of determining whether further exploration is necessary.

Consistent with a constructivist perspective on identity (for a discussion on constructivist vs. discovery perspectives, see Soenens & Vansteenkiste, [Chapter 17](#), this volume; Vignoles, Schwartz, & Luyckx, [Chapter 1](#), this volume; Waterman, [Chapter 16](#), this volume), Grotevant (1987) hypothesized that both assimilation (i.e., incorporating new information into an existing identity structure) and accommodation (i.e., transforming the existing structure to include new information) occur during identity exploration. Commitments enacted as a result of the exploration process become integrated into a newly consolidated sense of identity, which may contribute to a feeling of personal continuity over time (Dunkel, 2005). The individual then is charged with determining how satisfying and self-concordant this new identity is and how well it fits with the contexts in which one operates. These goodness-of-fit evaluations then cycle back to influence one’s desire and motivation to engage in further identity work and to consider additional alternatives (Crocetti, Rubini, & Meeus, 2008). If one’s commitments are judged as unsatisfactory, one may resume the process of exploration. This may occur as a result of recurrent evaluations of one’s current commitments, mandated by situational changes, individual growth, or other new information (Schwartz, 2001). In short, Grotevant alluded to the importance of both the *formation* and the continuous *evaluation* of identity commitments, and both these processes were proposed to influence each other in reciprocal fashion.

Second, identity control theory (Kerpelman et al., 1997) was proposed as an extension of Grotevant's (1987) model in an attempt to target the microprocesses that drive exploration and identity development. Identity control theory views identity development as a series of recurrent feedback loops intended to minimize the discrepancy between one's self-perceptions and the feedback received from others. Interpersonal feedback is most strongly valued when it originates from significant others, such as parents, peers, or romantic partners (Kerpelman et al., 1997; Schwartz, 2001). When the self-perception and the interpersonal feedback are incongruent, either the specific self-perception or the social situation itself is changed to produce congruence between the self-perception and personal standard (assimilation), or—when the latter course of action fails—the person's identity undergoes more comprehensive changes (accommodation). This process is repeated until the identity standard or goal is validated or modified. Again in line with Grotevant's model, Kerpelman et al. indicate that forming an initial sense of identity is an important first step. However, much identity work centers on evaluating how well this sense of identity fits with (internalized) personal standards and goals. For instance, Kerpelman et al. conceptualized exploration partially as a way to obtain feedback—both intra- and inter-personally—on current identity configurations and to evaluate the choices one has made in comparison with the identity goals that one holds.

Finally, much like the models introduced by Grotevant and by Kerpelman and colleagues, Bosma and Kunnen (2001) argued that identity development can be described as a sequence of short-term re-occurring transactions between a person and her or his context. Continuous identity work leads to confirmation of, or changes in, one's existing identity commitments. A balance between assimilation and accommodation is necessary for the development of a mature, flexible, and coherent identity. By defining identity development as changes in the strength and quality of commitments, Bosma and Kunnen (2001) recast commitment as a process rather than as an outcome. That is, commitments are continuously

evaluated, and maintained or changed as a result of this evaluation—rather than representing the endpoint of the identity development process.

To summarize, whereas the identity status model initially focused primarily on the formation of identity commitments (e.g., Marcia, 1966, 1980, 1993; Waterman, 1982), the distinction between identity formation and evaluation was made explicit by Grotevant (1987), among others. Subsequent theorizing suggested that formative and evaluative processes complement and influence each other, and should be included within a larger and more comprehensive model. However, at that point in the evolution of the identity status paradigm, no systematic attempts had been made to integrate commitment formation and commitment evaluation into a single empirically based model of personal identity development. In other fields of identity, however, such efforts have been undertaken. For example, with respect to sexual identity development (Dillon & Worthington, Chapter 27, this volume), Worthington, Navarro, Savoy, and Hampton (2008) developed an instrument to assess four identity dimensions (commitment, exploration, identity uncertainty, and synthesis or integration), enabling researchers to capture both development and revision of sexual identity.

---

## A Process-Oriented Approach to Identity Formation and Evaluation

### Introducing Four Interrelated Dimensions

Through the use of confirmatory factor analysis, Luyckx, Goossens, Soenens, and Beyers (2006) were able to validate a four-dimensional model consisting of exploration in breadth, commitment making, exploration in depth, and identification with commitment. Underlying this model is an unpacking of both commitment and exploration into two separate but interrelated dimensions apiece. The model includes processes of commitment formation and commitment evaluation—each of which includes one dimension of exploration and one dimension of commitment. The

commitment formation process of our model captures the dimensions by which adolescents select one of many possible identity alternatives. We refer to the dimensions involved in commitment formation as *exploration in breadth* and *commitment making* (Luyckx, Goossens, & Soenens, et al., 2006), and these dimensions are commonly captured in measures based on Marcia's (1966) identity status paradigm. Exploration in breadth refers to the gathering, both internally and externally, of information on various identity alternatives (indexed using items such as "I think actively about different directions I might take in my life" and "I think about different goals that I might pursue"). Commitment making refers to enacting strong choices in different identity domains, perhaps as a result of exploration in breadth (indexed using items such as "I have decided on the direction I am going to follow in my life" and "I have plans for what I am going to do in the future").

Approaches to commitment evaluation have concentrated primarily on the appraisal and reformulation of identity commitments (e.g., Bosma & Kunnen, 2001; Kerpeiman et al., 1997; Meeus, 1996). These approaches highlight the dimensions by which adolescents continuously evaluate their identity commitments. We refer to these dimensions as *exploration in depth* and *identification with commitment* (Luyckx, Goossens, & Soenens, et al., 2006). Exploration in depth refers to introspective mechanisms, gathering information, and talking with others about current commitments (i.e., commitments one has already made) in order to evaluate them (Meeus, 1996). Exploration in depth is indexed using items such as "I think about whether my plans for the future really suit me" and "I try to find out what other people think about the specific direction I decided to take in my life". Identification with commitment refers to the degree of security and certainty experienced with regard to one's existing commitments and to how well these commitments fit with one's own standards and wishes (Bosma, 1985). This dimension is indexed using items such as "My plans for the future match with my true interests and values" and "I am sure that my plans for the future are the right ones

for me". Prior to the introduction of our model, both of these terms had already been used to some extent by authors such as Bosma (1985), Grotevant (1987), and Marcia (1993).

Identification with commitment bears some similarity to the idea of person-commitment fit advanced in Waterman's (1992, Chapter 16, this volume) eudaimonic identity theory and in Deci and Ryan's (2002) self-determination theory (Soenens & Vansteenkiste, Chapter 17, this volume). Waterman defines *personal expressiveness* (an index of person-commitment fit) as engagement in self-defining activities and commitments that draw upon one's fundamental purposes in life. Personal expressiveness thus refers to the degree to which a person's sense of identity corresponds to her or his unique potentials (Waterman, 1990). Personal expressiveness also serves as an index of intrinsic motivation (Waterman et al., 2003), in that individuals experience a special fit or meshing with, and an unusually intense involvement in, their activities or commitments. When the alternatives that one considers, and to which one commits, are consistent with one's potentials (cf. the notion of autonomy within self-determination theory), commitment making might constitute a path to self-discovery (Schwartz, 2002; Schwartz, Mullis, Waterman, & Dunham, 2000).

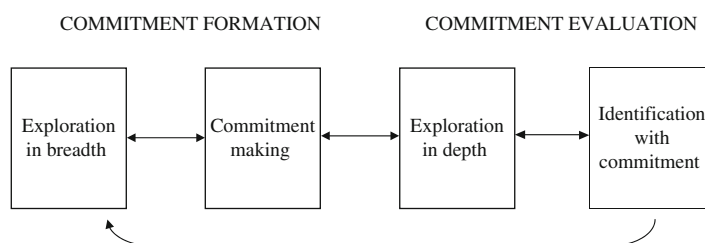
To clarify the meaning of these four different dimensions, take, for example, an individual who enrolls in college. After she has explored various possibilities for academic majors through, for instance, reading flyers or talking with others (exploration in breadth), she might choose one specific major (commitment making). The fact that she chooses a major does not imply that the identity process is finished. She will probably continue to gather information and turn her attention inward to evaluate the choice being made (exploration in depth). Gathering information about that specific choice can lead to a growing conviction that the chosen major is the right one (identification with that major will strengthen) or, conversely, that the chosen major is not the right one (identification with that major will weaken). If the person decides that this major is not the correct one, then exploration in

breadth may resume and a broad-based search for different alternatives might start again. In sum, a critical characteristic of this developmental sequence is its reciprocal nature (Bosma & Kunnen, 2001; Grotevant, 1987; Kerpelman et al., 1997). Identity development has often been characterized as an alternation of exploration and re-evaluation (Arnett, 2004; Bosma & Kunnen, 2001; Stephen, Fraser, & Marcia, 1992). Exploration in depth and identification with commitment interact in such a way that not only does exploration in depth influence identification with commitment but also (a lack of) identification with commitment can influence the need for a prolonged exploration in depth of those commitments or, as outlined in the above example, a renewed exploration in breadth of alternatives. Figure 4.1 presents a simplified graphical presentation of the interplay among the four identity dimensions as illustrated in the example. Again, the double-headed arrows emphasize the reciprocal nature of the relationships among these dimensions.

Exploration in breadth and in depth share some common themes in that they are both characterized, and probably prompted, by being information-oriented and by maintaining an open and flexible approach to life (Berzonsky, Chapter 3, this volume). This contention is supported by the substantial correlation ( $r$ 's range from 0.47 to 0.66,  $p$ 's < 0.001; mean  $r = 0.55$ ) obtained between these two exploration dimensions in a series of Belgian studies using the Dimensions of Identity Development Scale<sup>1</sup> (DIDS; Luyckx, Schwartz, Berzonsky, et al., 2008). However, these two dimensions

likely differ in their target and goal (i.e., choosing from different alternatives vs. evaluating current commitments) and in the specific strategies involved (i.e., more externally oriented and broad-based vs. more internally based; Berzonsky & Luyckx, 2008). Relatedly, longitudinal research has documented that these dimensions do not develop in tandem; increases (or decreases) in exploration in breadth may not necessarily be accompanied by increases (or decreases) in exploration in depth, and vice versa (Luyckx, Goossens, & Soenens, 2006).

Commitment making and identification with commitment also share a substantial amount of variance in Belgian studies using the DIDS ( $r$ 's range from 0.62 to 0.69,  $p$ 's < 0.001; mean  $r = 0.66$ ), likely due to the fact that enacting strong identity choices generally generates feelings and perceptions of security and certainty. Further, changes in both these dimensions were substantially and positively related across time: increases (or decreases) in commitment making were positively related to increases (or decreases) in identification with commitment (Luyckx, Goossens, & Soenens, 2006). However, as demonstrated later in the present chapter, commitment making and identification with commitment do not always accompany one another. Further, the distinction between these dimensions sheds new empirical light on the link between identity and psychosocial adjustment. Two studies (Luyckx, Goossens, & Soenens, et al., 2006; Luyckx, Schwartz, Berzonsky, et al., 2008) indicated that, when looking at unique associations, identification with commitment was substantially related to various indicators of psychosocial adjustment,



**Fig. 4.1** Integrating commitment formation and commitment evaluation processes

whereas commitment making was largely unrelated to these outcome measures.

We argue that the current model applies not only to chosen identities across the lifespan (such as occupational identity) but also to ascribed identities (i.e., personal characteristics over which one has no personal control), such as one's race or ethnicity (Umaña-Taylor, [Chapter 33](#), this volume) and having been adopted (Grotevant & Von Korff, [Chapter 24](#), this volume). In such cases, the model provides insights into how individuals assess and evaluate what these ascribed identities *mean* to them. For instance, being adopted or being male or female may carry different meanings for different individuals, and these meanings can be explored, committed to, and subsequently identified with or revisited. So, although these four identity dimensions are thought to characterize identity development in general, individual differences exist both in the extent to which individuals utilize these processes and in the extent to which these processes develop and influence each other across time (Luyckx, Goossens, & Soenens, [2006](#)). For instance, for foreclosed adolescents—those who latch onto the values and choices provided by significant others without considering other alternatives (Marcia, [1966, 1980](#))—a thorough exploration in breadth prior to making commitments is largely absent. Further, when individuals experience the commitments they have enacted as personally expressive (whether or not these commitments resulted from a period of exploration in breadth), they may feel less inclined to proceed to an in-depth affective or socio-cognitive evaluation of their commitments (i.e., exploration in depth). The congruence between the commitments made and the person's potentials and wishes may decrease the need for re-evaluation of the choices enacted, resulting in a high degree of identification with commitment without the need for extensive exploration in depth.

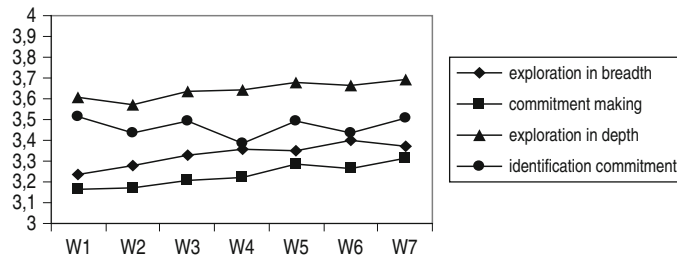
The theorizing underlying our model has recently inspired other neo-Eriksonian researchers to develop similar process-oriented models. For instance, Crocetti, Rubini, & Meeus ([2008](#)) have proposed an 3D identity model, consisting

of commitment, in-depth exploration, and reconsideration of commitment (see Klimstra, Hale, Raaijmakers, Branje, & Meeus, [2010](#) for a longitudinal investigation using this model). Reconsideration of commitment bears some similarity to exploration in breadth because it encompasses sorting through different alternatives. The impetus for this search, however, comes from evaluating current commitments and finding that they are no longer sufficient or satisfying. As such, similar to our work, the model introduced by Crocetti et al. ([2008](#)) explicitly focuses on some of the mechanisms involved in constructing and revising one's identity (Klimstra, Luyckx, Hale, Meeus, van Lier, & Frijns, [2010](#)).

### Assessing Identity Development Across Time

Most of the work based on our model has been conducted with a longitudinal dataset in which these identity dimensions were assessed seven times with semi-annual measurement waves in a sample of college students (i.e., the Leuven Trajectories of Identity Development Study or L-TIDES; Luyckx, Schwartz, Goossens, Soenens, & Beyers, [2008](#)). This design enabled us to examine how these dimensions develop and relate to one another across time. [Figure 4.2](#) illustrates the mean observed developmental trends for the total sample across time.

Changes in the dimensions of commitment formation and evaluation appeared to be limited and gradual, with no steep increases or decreases. Further, the initial levels of these identity dimensions (scores could range between 1 and 5) were already quite elevated when our participants entered university at Wave 1. These findings suggest that commitment formation and evaluation begin to take place during the high-school years (for empirical evidence of this, see [Chapter 2](#); Klimstra, Hale, et al., [2010](#); Meeus, van de Schoot, Keijsers, Schwartz, & Branje, [2010](#); Kroger & Marcia, [Chapter 2](#), this volume). Interestingly, the observed trajectory of identification with commitment seemed to



**Fig. 4.2** Mean observed developmental trends of four identity dimensions in L-TIDES (W = measurement wave)

fluctuate somewhat from one measurement wave to the next. These developmental changes could very well reflect a continuous evaluative process, which has been hypothesized to represent a core mechanism in identity evaluation (Kerpelman et al., 1997). The fact that these fluctuations emerged in averaged group data may have indicated that, given the fact that all participants in the Luyckx, Schwartz, Goossens, Soenens, et al. (2008) study were college students from the same academic department, important contextual factors (such as having exams twice a year) may have influenced their identity development to some extent.

Latent growth curve analyses reported by Luyckx and colleagues (2008) indicated that, on average, commitment making and exploration in depth increased linearly over time (see also Meeus, Iedema, Helsen, & Vollebergh, 1999). Exploration in breadth showed a linear increase over time combined with a negative quadratic slope, signaling that the linear increase leveled off toward the end of the study. Apparently, the motivation to engage in a broad exploration of different alternatives might stabilize or even decrease as the strength of commitments continues to increase (Grotevant, 1987). Relatedly, when people come close to finishing their university studies, they need to figure out what they will do with their lives, which means they need to stop exploring to some extent and make commitments. Of course, a thorough exploration in breadth may occur again later on in adulthood—such as during the “midlife crisis.” Identification with commitment showed a linear decrease over time, coupled with a positive quadratic slope. This means that the linear decrease leveled off during the course

of the study and that the scores showed an upward trend toward the end.

### Typologies of Identity Formation in Adolescence and Adulthood

To this point, we described identity development at the group level and have focused on the developmental trajectories of the four identity dimensions, averaging across subgroups that might be characterized by different change trajectories. Recently, Kunnen (2009) investigated identity formation at the individual level and assessed the ways in which 28 psychology students developed across a period of 3 years with respect to their educational commitments. She found evidence for substantial individual differences in developmental pathways. Importantly, several authors have stressed this heterogeneity or diversity in identity development in adolescence and (emerging) adulthood in the literature and, consequently, have distinguished—empirically, theoretically, or both—among different identity statuses, classes, or trajectories. As demonstrated in Table 4.1, across studies, these classes appear to be consistent with Marcia’s original model, despite the fact that the dimensions used to assign individuals to these classes differ across studies. This set of status groups (with some additional variants identified) was again supported by Kunnen (2009) in her qualitative study.

In this subsection, we explore various typologies that have been developed to characterize longitudinal changes in identity. One of the earliest researchers to focus on this issue was Josselson (1996), who extended Marcia’s (1966)



**Table 4.1** Existing typologies of identity formation in adolescence and adulthood

Author(s)	Class labels			
Marcia (1966)	Achievement	Moratorium	Foreclosure	Diffusion
Josselson (1996)	Pathmakers	Searchers	Guardians	Drifters
Côté & Levine (2002)	Resolvers	Searchers	Guardians	Drifters/refusers
Helson & Srivastava (2001)	Achievers	Seekers	Conservers	Depleted

identity status approach into midlife through a qualitative longitudinal study of women's development, beginning at the end of college. Josselson assumed that Marcia's four identity statuses represented identity trajectories, or characterological ways of approaching identity issues throughout adulthood. Indeed, supporting this assumption, the identity status to which young women were assigned in college was found to predict the ways in which they dealt with challenges throughout adulthood. In early adulthood, pathmakers were taking on new challenges, whereas guardians continued to feel firm in the commitments they had adopted from significant others early in their lives. Searchers continued to experience substantial ambivalence and self-doubt, and drifters were still unable to find meaning in their lives. By middle age, all groups had increased in awareness, albeit in different ways. By that time, pathmakers had integrated new aspects into their ever-evolving sense of self; guardians had learned to make their own decisions; and searchers had moved toward a clearer sense of self-definition. Only the drifters continued to stand out because their increased awareness had only allowed them to accept themselves and their histories, without finding their place in life.

Côté and Levine (2002) distinguished among five identity strategies theorized as being common in late-modern societies. Resolvers are actively engaged in the process of forming an identity, fully capitalizing on opportunities provided within society, and motivated by a desire to optimize their potentials. Searchers are often driven by unrealistically high standards, rendering them unable to form a steady set of commitments. They seem to be locked in a perpetual state of identity exploration and are in despair about their inability to enact or sustain commitments.

In contrast, guardians have internalized the values of their parents or of society, providing them with a set of strict guidelines to move into adulthood. However, the rather rigid and change-insensitive nature of this process could prevent them from growing intellectually and emotionally. Finally, refusers and drifters evidence a lack of steady commitments to an adult lifestyle and community. These two subgroups are distinguished in terms of the personal resources they have at their disposal (both tangible and intangible resources, such as family wealth or occupational skills). Whereas refusers have few resources at their disposal, drifters are more resourceful, but they seem unable or uninterested in using the resources available to them.

Finally, Helson and Srivastava (2001) distinguished among four distinct classes of personality development in midlife women, based upon two underlying dimensions (environmental mastery and personal growth; Ryff, 1989). Environmental mastery was defined as the ability to achieve a good fit with one's environment and to develop a sense of mastery in managing and relating to one's surroundings. Personal growth was defined as the ability to see the self as growing and expanding in ways that reflect increasing self-knowledge and effectiveness. Individuals scoring high on both dimensions were labeled achievers, displaying a conscientious, outgoing orientation and identity integration. Individuals scoring high on personal growth but low on environmental mastery were labeled seekers. They were open to new experiences and evidenced the greatest amounts of identity exploration. Individuals scoring high on environmental mastery but low on personal growth were labeled conservers, and these individuals were motivated to seek security and were described as readily accepting social norms and values. Finally,

individuals scoring low on both dimensions were labeled as depleted—lacking confidence, psychological resources, and identity integration.

Building on these previous models (and especially on Josselson's developmental typology), Luyckx, Schwartz, Goossens, et al. (2008) empirically identified four developmental trajectory classes: pathmakers, searchers, guardians, and consolidators. No separate class of diffusions or drifters was empirically identified. It is possible that individuals matching the drifter profile may have dropped out of the longitudinal study after one or two assessment waves (the class solution was derived using only those individuals who participated in at least three of the seven waves of data collection).

Pathmakers displayed high scores on all four identity dimensions, and these scores—except for identification with commitment—increased across time. These individuals were also characterized by moderate or high levels of well-being. Pathmakers appear to be active in forming, evaluating, and strengthening their commitments—characteristic of what Côté and colleagues (Côté & Levine, 2002; Schwartz, Côté, & Arnett, 2005) have labeled as developmental individualization. Developmental individualization represents a conscious search for growth opportunities (see also Stephen et al., 1992 for description of the experiential orientation and Berzonsky's, Chapter 3, this volume, for description of the information-oriented style). The developmentally individualized person transacts with the environment in a purposeful way and takes advantage of social possibilities in an active manner to form, develop, and evaluate her or his identity on the way to self-realization (Côté, 2002; Schwartz, 2002; Waterman, Chapter 16, this volume).

Searchers scored low on the commitment dimensions and high on the exploration dimensions. They were exploring various alternatives in breadth, but they were also evaluating tentative commitments. A substantial portion of searchers were characterized by fairly high and stable levels of distress (see also Luyckx, Schwartz, Berzonsky, et al., 2008; Schwartz, Zamboanga, Weisskirch, & Rodriguez, 2009). These individuals are likely characterized by

default individualization—a passive and confused approach to transacting with the social environment (Côté & Schwartz, 2002; Schwartz, Côté, et al., 2005)—which may interfere with the development and evaluation of commitments (Stephen et al., 1992). However, many searchers reported moderate levels of well-being, and about 20% of individuals in this class were characterized by high levels of self-esteem and low levels of depressive symptoms. Apparently, intense identity searching can be associated with some distress, but it may also serve as the route to personal growth (Arnett, 2000; Helson & Srivastava, 2001) and hence should be viewed in the light of personal development or self-discovery (Schwartz, 2002; Waterman, Chapter 16, this volume). As we note below, the extent to which exploration is associated with self-discovery or with distress likely depends partially on the quality and coherence of the exploration process itself (Luyckx, Schwartz, Berzonsky, et al., 2008).

Guardians displayed stable and moderate scores on all four identity dimensions across time. These individuals appeared to be rather closed to new identity options and tended not to explore their current commitments in depth. These individuals—to some degree—resemble “firm” or “closed” foreclosures (Archer & Waterman, 1990; Kroger, 1995), who tend to react defensively to information that threatens their identity. Schwartz, Côté, et al. (2005) found foreclosed individuals to have elevated scores on indices of default individualization, referring to a life course dictated by circumstance, with little agentic assertion on the part of the person (Côté, 2000).

Finally, consolidators represented a relatively new identity trajectory class. Their main identity work appeared to be evaluating and consolidating their current identity commitments. They tended to score highly on commitment making, accompanied by a strong upward trend across time. Exploration in breadth, however, was relatively low. Exploration in depth and identification with commitment were initially high and remained so over time. Virtually all consolidators reported moderate to high levels of well-being across time. Archer and Waterman (1990) described

a more adaptable subcategory of foreclosure—open foreclosure—that, to some extent, resembles this consolidator class. Open foreclosures are described in the literature as adolescents who have committed themselves to a set of alternatives without much prior exploration, but who are characterized by a flexible orientation (i.e., a high score on exploration in depth). However, although open foreclosures are willing to evaluate their current choices, they show virtually no interest in exploring other identity options.

These classes were developed using a relatively short-term longitudinal study. More intensive and long-term studies on identity remain to be conducted, starting in early adolescence and extending well into adulthood. Obeidallah, Hauser, and Jacobson (1999) outline three competing hypotheses reflecting three long-term developmental pathways. Some of these ideas are grounded in Erikson's (1950, 1968) lifespan theorizing and are very similar, for instance, to those of the lifespan approach to vocational development (Super, 1990; Skorikov & Vondracek, Chapter 29, this volume). First, the continuity effect hypothesis states that individuals who experience optimal functioning in adolescence will also report high levels of well-being in adulthood. Second, the rebound effect hypothesis states that initial outcomes could be short lived; experiencing optimal psychosocial functioning during adolescence would not necessarily lead to optimal outcomes in adulthood. Third, the sleeper effect hypothesis states that the developmental work of adolescence is not accompanied by psychosocial benefits in the short term. Instead, optimal psychosocial functioning appears later on, when one must utilize identity-based resources to cope with the challenges of adulthood.

These three hypotheses emphasize the need to view identity within a lifespan framework. The continuity effect hypothesis implies that the detrimental effect of prolonged searching in adolescence and emerging adulthood continues into adulthood. However, the sleeper effect hypothesis implies that the beneficial effects of searching would appear primarily once individuals have reached adulthood. Arnett (2000) argues that exploration in emerging adulthood is likely to

be beneficial in the long run because it allows individuals to obtain a broad range of life experiences before taking on enduring adult responsibilities (see also Josselson, 1996). Similarly, the continuity effect hypothesis implies that, among the identity trajectory classes that we identified, pathmakers and consolidators would continue to demonstrate the most favorable adjustment in adulthood. The rebound effect hypothesis, on the other hand, implies that long-term beneficial effects may not occur for consolidators because they do not explore in breadth during the college years, and as a result, their identities are unlikely to be “updated” during or shortly after this time period.

### **Antecedents, Correlates, and Consequences of Identity Formation and Evaluation**

In this section, we briefly summarize longitudinal research into the antecedents, correlates, and consequences of the different identity dimensions defined earlier. The main focus is on personality factors and perceived parenting. With respect to personality traits, reciprocal influences (as found in cross-lagged analyses) and interrelated developmental changes (as found in latent growth curve analyses) were found. These findings suggest an interdependent personality-identity system, with mainly neuroticism, openness to experience, and conscientiousness influencing or being influenced by identity (Luyckx, Soenens, & Goossens, 2006). More specifically, the developmental trajectory of neuroticism appears to be related to the developmental trajectories of the commitment dimensions (negatively) and exploration in breadth (positively). Further, whereas openness was especially (positively) related to exploration across time, conscientiousness influenced and was influenced by the degree to which individuals were able to form and identify with identity commitments. In sum, we found that identity and personality developed as part of a system, with each reinforcing the other (Caspi & Roberts, 1999). Not only did Luyckx, Soenens, et al. (2006) find that trait personality influenced

identity processes but they also found that the significant amount of decision making, competence, and self-reflection that identity formation and evaluation required also tended to prompt personal change to some extent (cf. Pals, 1999).

Second, within research on family socialization and parenting, there is a strong interest in the construct of psychological control, a parenting dimension highly relevant to the process of identity because it intrudes upon or impedes the adolescent's search for autonomy (Barber, 2002). "[Psychological control] is characterized by a type of interpersonal interaction in which the parent's psychological status and relational position to the child is maintained and defended at the expense and violation of the child's development of self" (Barber, 2002, p. 6). Psychological control creates a climate in which dysfunctional or maladaptive identity processes are initiated or exacerbated and, conversely, in which the child's self-initiation and self-governing are impaired. As such, psychological control represents the inverse of autonomy-supportive and empathetic parenting (Soenens et al., 2007; Soenens & Vansteenkiste, Chapter 17, this volume).

Luyckx, Soenens, Vansteenkiste, Goossens, and Berzonsky (2007) and Beyers and Goossens (2008) conducted a longitudinal study on the four-dimensional identity model and its relationships to constructs such as supportive parenting and psychological control. Findings were in line with transactional models of socialization that emphasize the need to study both child and parent effects when examining parent-child relationships (e.g., Soenens, Luyckx, Vansteenkiste, & Goossens, 2008): commitment formation/evaluation and parenting reciprocally influenced each other across time. For example, emerging adults who perceived their parents as intrusively controlling appeared to experience difficulties in establishing clear and committed identity choices across time. Moreover, to the extent that these individuals did manage to make commitments, they were unlikely to identify with them or to experience a sense of certainty and satisfaction. Conversely, continuing exploration in breadth in the college context led to increases in perceived parental psychological control across

time. As such, psychological control could also emerge as a reaction to a continuous search for identity alternatives, perhaps because parents might pressure their offspring to "settle down" into firm identity commitments. These parenting strategies, however, are likely to lead to a further forestallment of self-endorsed commitments, as explained above.

---

## Moving Identity Theory and Research Forward

### Distinguishing Between Ruminative and Adaptive Exploration

Exploration is generally thought to be an adaptive process that facilitates the enactment and the evaluation or strengthening of identity commitments. Indeed, research has found exploration to relate positively to variables such as curiosity and openness to experience (Clancy & Dollinger, 1993; Luyckx, Soenens, et al., 2006). However, identity exploration—especially prolonged exploration in breadth—is also associated with depressive symptoms and lowered self-esteem (Schwartz et al., 2009). Although these somewhat paradoxical findings may reflect "two sides of exploration," it is also possible that different forms of exploration are associated with openness and maladjustment. It is possible that exploration can be subdivided into reflective vs. ruminative components (Burwell & Shirk, 2007) and that the elevated distress associated with exploration may be indicative of ruminative or maladaptive exploratory processes. Hence commonly used identity measures may fail to differentiate such a ruminative type of exploration from adaptive forms of exploration and may conflate ruminative and reflective sources of variance in exploration, which may relate differentially to psychosocial outcomes.

Similar mixed findings in studies of personality led Trapnell and Campbell (1999) to distinguish between ruminative or maladaptive and reflective or adaptive types of private self-attentiveness. Self-rumination is a negative, chronic, and persistent self-attentiveness

motivated by fear and perceived threats or losses to the self, whereas self-reflection is motivated by a genuine interest in the self. Others (Treyner, Gonzalez, & Nolen-Hoeksema, 2003) have also distinguished between relatively adaptive types of self-reflection and maladaptive types of self-rumination—the latter characterized by brooding, that is, an unproductive, passive, and repetitive focus on the self.

Previous research has demonstrated that self-reflection is related to higher levels of empathic concern, perspective taking, and openness, whereas self-rumination is related to lower levels of perspective taking and to higher levels of neuroticism and depressive and anxiety symptoms (Joireman, Parrott, & Hammersla, 2002; Nolen-Hoeksema, 2000). Further, Ward, Lyubomirsky, Sousa, and Nolen-Hoeksema (2003) have demonstrated that self-rumination is negatively related to commitment to future plans. Similarly, Segerstrom, Tsao, Alde, and Craske (2000) have emphasized the importance of both rumination and worry in understanding difficulties and unresolved issues in identity formation. People scoring high on ruminative types of exploration may have difficulty settling on satisfying answers to identity questions. Partially troubled by what they perceive as inadequate progress toward personally important identity goals, they keep asking themselves the same questions, resulting in an intrusive feeling of uncertainty and incompetence.

Ruminative and nonproductive identity processes are increasingly important to examine as the process of developing a sense of identity becomes increasingly difficult. As Arnett (2000) and Côté (2002) have noted, establishing a stable and viable identity has become increasingly challenging for young people in contemporary societies. A portion of today's young people—especially in Western societies—are relatively free from limitations on their choices and can assume a more active role in their own development (Côté & Levine, 2002; Côté & Schwartz, 2002). Late-modern societies, however, also appear to be increasingly chaotic and less supportive. At the same time, societal pressure on individuals to create their own identity with

little external help has increased (Baumeister & Muraven, 1996). Some individuals—especially those whom Côté (2002, Côté & Levine, 2002) would characterize in terms of developmental individualization—thrive in such a setting and are successful in developing and forming self-endorsed identity commitments. However, other individuals may become “stuck” in the exploration process, continue to dwell over the different alternatives at hand, and experience considerable difficulty arriving at fully endorsed commitments (Schwartz, Côté, et al., 2005).

Consequently, Luyckx, Schwartz, Berzonsky, et al. (2008) extended their identity model by including ruminative exploration, conceptualized as a dimension that would delay or inhibit progress in both the formation and the evaluation of identity commitments. Ruminative exploration would be indexed using items such as “I keep wondering which direction my life has to take” and “I worry about what I want to do with my future.” The addition of ruminative exploration helped to clarify some of the previous mixed findings on exploration. For instance, Luyckx and colleagues found, in two samples of high-school and college students, that—when looking at unique variability in each exploration dimension, controlling for the others—ruminative exploration was positively related to depressive and anxiety symptoms and negatively related to self-esteem, commitment making, and identification with commitment. Controlling for ruminative exploration, however, exploration in breadth and in depth were unrelated to adjustment and positively related to both commitment dimensions. Future long-term longitudinal research should investigate whether ruminative exploration is a core developmental dimension of identity or whether it is more stable and grounded in individuals' personality—that is, related to traits such as rumination and indecisiveness.

### Extending Marcia's Identity Statuses

The use of these five dimensions has allowed us to shed additional light on Marcia's (1966;

Kroger & Marcia, [Chapter 2](#), this volume) identity statuses. Through the use of cluster analysis using the five aforementioned identity dimensions, identity clusters similar to Marcia's original four identity statuses have emerged repeatedly (irrespective of specific questionnaires used to derive the statuses; e.g., Crocetti, Rubini, Luyckx, & Meeus, 2008), with some additional variants of some statuses also emerging from analysis. In a series of Belgian studies, these statuses were obtained in samples of high-school and college students, young adults in the workforce, and individuals afflicted with a chronic illness. Further, in a large-scale study on approximately 10,000 American college students, a similar set of identity clusters emerged, and these clusters were further validated against a broad range of outcome measures (Schwartz, Beyers, et al., in press).

These cluster-analytic studies have made it possible to address certain issues that have been raised regarding the identity status paradigm. For example, several authors have questioned whether the moratorium status is truly an adaptive stage on the path toward forming steady identity commitments. To the extent that young people are engaged in a "perpetual moratorium," they may experience aggravated identity confusion (Berzonsky, 1985; Marcia, 2002). For such individuals, moratorium may be more similar to diffusion than to achievement in terms of decision making and adjustment (Côté & Schwartz, 2002). As noted above, Côté and Levine (2002) described a group of searchers driven by unrealistically high standards for functioning, which undermine their ability to form steady commitments. These individuals seem to be locked in a ruminative cycle because they are unable to find perfection within themselves (see also Helson, Stewart, & Ostrove, 1995). So there remains a question about whether moratorium represents an adaptive response to the task of developing a sense of identity, and whether the distress associated with active exploration is part of a temporary transition toward identity consolidation. Luyckx, Schwartz, Berzonsky, and colleagues (2008) indeed found that members of the

moratorium cluster scored as high on ruminative exploration as they did on exploration in breadth and in depth (as opposed to the achievement cluster, which scored high on exploration in breadth and in depth and low on ruminative exploration). Consequently, following Côté and Levine (2002) and Helson et al. (1995), moratorium might denote some type of arrested development (as is the case with diffusion; Orlofsky, Marcia, & Lesser, 1973), blocking some individuals from forming commitments.

With respect to the diffusion status, Luyckx and colleagues (e.g., Luyckx, Goossens, Soenens, Beyers, & Vansteenkiste, 2005; Luyckx, Schwartz, Berzonsky, et al., 2008) differentiated empirically between two diffusion clusters, carefree and diffused diffusion, with members of the diffused diffusion cluster scoring high on ruminative exploration and maladjustment. In contrast, carefree diffusion was characterized by an untroubled approach toward identity, and individuals in this cluster did not appear to be distressed by their current lack of strong identity commitments (but see Schwartz, Beyers, et al., in press, as discussed later on in this chapter). This distinction parallels a distinction that earlier researchers had drawn between different types of diffusion. For example, Marcia (1989) delineated between carefree and pathological types of diffusion; and Archer and Waterman (1990) distinguished between apathetic and commitment-avoiding diffusions. Whereas apathetic diffusions display an "I don't care" attitude to mask underlying insecurities, commitment-avoiding diffusions appear to enjoy their current lack of commitments (Berzonsky, 1985).

With respect to the committed statuses (i.e., the achievement and foreclosure clusters), the use of this extended model shed interesting empirical light on how these two statuses differ. Not only were achieved individuals characterized, as expected, by high scores on the two adaptive forms of exploration (whereas foreclosed individuals had low scores on these dimensions), but achieved individuals also scored higher on commitment making, and especially on identification

with commitment, in a number of samples (e.g., Luyckx et al., 2005). This finding again emphasizes the importance of assessing both commitment dimensions. Foreclosed individuals appear to differ from achieved individuals not only in the strength of their commitments but also, and especially, in the degree to which they identify with their commitments. Apparently, foreclosed individuals feel less immersed in, involved in, and enthusiastic about their commitments, possibly due in part to their closed outlook on life and to their lack of exploratory strategies in dealing with identity issues. This finding is in line with previous research demonstrating that, compared to achieved individuals, foreclosed individuals feel less autonomous and personally expressive (Luyckx, Vansteenkiste, Goossens, & Duriez, 2009; Waterman, 2007) and score lower on measures of identity synthesis (Schwartz, Beyers, et al., in press; Soenens & Vansteenkiste, Chapter 17, this volume).

When interpreting the empirically obtained status clusters described in this section, it is important to bear in mind that the questionnaires used to derive these statuses (such as the DIDS) largely tap into present exploratory processes (as demonstrated in the sample items provided earlier in this chapter), making these questionnaires especially suitable for use in prospective longitudinal research. However, the original delineation of Marcia's (1966) identity statuses also includes processes of exploration in the past. For instance, when looking at both the achievement and foreclosure statuses, these are originally defined mainly as making identity commitment after or without a period of *past* exploration, respectively. The achievement and foreclosure status clusters obtained in the studies described in this section are defined somewhat differently: these consist of individuals who succeed in making identity commitments and who are *currently* exploring or not exploring identity issues, respectively. Hence, prospective studies using these measures on multiple occasions can shed further light on the exact nature of these identity clusters and on the degree of convergence between Marcia's "classical"

statuses and these empirically derived identity clusters.

### **New Correlates, Target Groups, and Methodologies**

*New correlates.* Given that perfectionism essentially deals with how individuals set and pursue standards, this personality dimension is thought to be an important determinant of how the identity development process will unfold (Campbell & Di Paula, 2002). Luyckx, Soenens, Goossens, Beckx, and Wouters (2008) demonstrated that maladaptive (or neurotic) and adaptive types of perfectionism (Flett & Hewitt, 2002) were differentially related to the five identity dimensions, providing insight into some of the mechanisms involved in identity formation and evaluation. Central to the concept of perfectionism is the setting of high standards that provide motivation to engage in proactive and goal-directed behaviors. To the extent that individuals are able to flexibly adjust and re-evaluate their standards in accordance with life events, experiences, and situational demands, these standards may provide them with a sense of purpose and goal directedness (Hamacheck, 1978). Luyckx, Soenens, Goossens, and colleagues (2008) indeed found that such "adaptive" perfectionism appeared to facilitate exploration in breadth and in depth, as well as commitment making and the subsequent identification with the commitments that are enacted. The setting of high standards, however, turns into maladaptive perfectionism when individuals rigidly adhere to their standards and chronically engage in negative self-evaluations (Shafran & Mansell, 2001). As such, perfectionism creates vulnerability for maladjustment because such "neurotic" perfectionists tend to define their self-worth in terms of achieving these unrealistic standards. Luyckx, Soenens, et al. (2008) found that maladaptive perfectionism was associated with a ruminative approach to identity exploration and appeared to inhibit both commitment dimensions. It appears that, through the process of ruminative exploration,

neurotic perfectionists continue to focus on unrealistic identity standards instead of goal-directed identity work, such as proactive exploration or commitment making. As such, neurotic or maladaptive perfectionism interferes with the development of an integrated set of identity commitments.

Schwartz, Beyers, et al. (in press) focused on the practical applicability and public-health relevance of the identity statuses by relating them to health-compromising behaviors such as illicit drug use, unsafe sexual behavior, and drunk driving. Foreclosure and achievement tended to be associated with the lowest levels of health risk behaviors, especially illicit drug use and impaired driving. Apparently, either type of commitment (foreclosed or achieved) is sufficient to protect against health-compromising behaviors, but these effects may occur for different reasons: conformity and obedience in foreclosed individuals vs. advanced moral reasoning and decision making in achieved individuals (Krettenauer, 2005). Self-reported rates of dangerous drug use were between two and three times greater in the carefree diffusion status than in any of the other statuses. Carefree-diffused participants were also significantly more likely to engage in hazardous alcohol use, to ride with a drunk driver, and to have sexual relations with a stranger. Therefore, failing to engage in any meaningful identity activity—which defines the carefree diffusion status and differentiates it from diffused diffusion (in which some exploration, albeit ruminative and nonproductive, is taking place)—may pose serious health hazards that can place the person at risk for serious injury, illness, or death. A lack of consideration for the future therefore appeared to be associated with the highest likelihood of engaging in present-oriented, hedonistic, dangerous behaviors (Luyckx, Lens, Smits, & Goossens, 2010; Zimbardo, Keough, & Boyd, 1997).

*New target groups.* Most of the research discussed so far has focused exclusively on high-school or college students. Consequently, an important aim of our recent work has been to validate the five-dimensional identity model in new target groups and demonstrate the

usefulness of studying identity formation and evaluation processes in young people outside the high-school or college context (Schwartz, 2005). Luyckx, Schwartz, Goossens, and Pollock (2008) studied identity development in a sample of employed, non-student emerging adults and found that specific identity dimensions—and especially the degree to which identity commitments are made—were associated with achieving a subjective sense of adulthood. Subjective adulthood is important to study because it may promote responsible behavior and may be protective against depressive symptoms and against extensive drug and alcohol use (Nelson & Barry, 2005). Luyckx et al. (2008) found that employed young people scored higher on commitment making as compared to college students, which partially explained the higher subjective adulthood scores among employed emerging adults.

Relatedly, Luyckx and colleagues (2010) derived identity statuses in a sample of 21–40-year-old employees, and highly similar clusters as described above emerged. These employees were found to function substantially differently (on indicators of job burnout and engagement) in their jobs depending on the identity status in which they were classified (and these differences remained largely stable across 1 year). As expected, achieved individuals scored substantially higher on job engagement and substantially lower on job burnout as compared to individuals in the diffused diffusion status. Whereas foreclosed individuals generally scored as low as achieved individuals on indices of job burnout across time, they scored significantly lower on job dedication, and especially on job absorption (on which they did not differ significantly from diffused individuals). This suggests that, although foreclosed individuals may not necessarily experience more burnout than their achieved counterparts, they do feel less immersed in, involved in, and enthusiastic about their work. As mentioned above, in the case of foreclosure, individuals did not thoroughly explore possible future life plans and may have foreclosed on a job that they did not fully endorse—which Skorikov and Vondracek (Chapter 29, this volume) frames



as experiencing work as a job instead of as a calling.

Finally, in one of the first studies in this direction, Luyckx, Seiffge-Krenke, and colleagues (2008) recruited a sample of emerging adults with a chronic illness, that is, type 1 diabetes. Luyckx and colleagues examined the ways in which identity processes affected general and illness-specific measures of well-being through their influence on illness-specific coping strategies. They found that achieving a sense of identity appeared to facilitate problem-focused strategies in coping with diabetes and with the daily diabetes management regimen, as well as to facilitate integrating the illness into one's sense of self. In sum, a strong identity seems to represent an important internal resource determining, at least in part, how individuals deal with (chronic) illness-related stressors. A recently collected dataset consisting of more than 400 adolescents with congenital heart disease confirmed the importance of having a strong sense of identity in coping with and adjusting to a chronic medical illness (Luyckx, Goossens, Van Damme, & Moons, 2010).

*New methodologies.* Based on the identity model introduced by Crocetti et al. (2008) and inspired by the work of Kernis and colleagues (Kernis, Grannemann, & Barclay, 1989; Heppner & Kernis, Chapter 15, this volume), Klimstra and colleagues (2010; Heppner & Kernis, Chapter 15, this volume) focused on the short-term or daily dynamics of identity formation and, more specifically, on the interplay between making and reconsidering identity commitments. Findings indicated that identity formation processes operate on a day-to-day basis, with commitment and reconsideration of commitment (i.e., feeling uncertain about one's commitment and trying to search for a new one) mutually influencing each other from one day to the next. Further, Schwartz, Klimstra, et al. (in press) found that intra-individual fluctuations in these identity dimensions from one day to the next served as important predictors of subsequent levels of these same identity dimensions, as well as of depression and anxiety. More specifically, large fluctuations in reconsideration of commitments from one day to another

were related to higher subsequent levels of reconsideration, depression, and anxiety, and to lower subsequent levels of identity commitments. Apparently, being certain about one's commitments one day but doubting them the next day might signal a moratorium-like state, resulting in feelings of distress and a less well-synthesized identity.

---

### Suggestions for Intervention and Counseling

Interventions to promote healthy identity development might be most relevant in contemporary societies that lack structure and guidance on which to rely in forming and maintaining a sense of identity (Côté, 2000; Schwartz, 2001). Interventions have as their primary objective to facilitate movement from a less coherent sense of identity to a more synthesized identity, as a way of reducing confusion and uncertainty (Josselson, 1994). As noted, in line with Erikson's (1968) model of lifespan development, the sense of identity that one develops in adolescence and emerging adulthood also helps to determine one's success in addressing subsequent developmental tasks in adulthood. Hence, such an integrated sense of identity is crucial because it helps to unify the various aspects of one's life and everyday experiences, thereby providing a sense of direction and meaning in one's life (Schwartz, Kurtines, et al., 2005). A number of identity intervention studies have been conducted, primarily targeting skills such as decision making, social perspective taking, and problem solving (Enright, Olson, Ganiere, Lapsley, & Buss, 1984; Markstrom-Adams, Ascione, Braegger, & Adams, 1993). Initial results have suggested that several identity processes, such as generating potential identity alternatives, can be improved by way of intervention. However, follow-up data indicate that intervention gains may not be maintained after the intervention activities end (Ferrer-Wreder et al., 2002). To strengthen long-term effects of intervention programs, additional follow-up activities might

need to be conducted after the intervention has ended.

It is important to bear in mind that most of the identity statuses or trajectories described in the present chapter are not universally healthy or unhealthy (Josselson, 1994). For example, for those individuals who have already committed themselves to certain identity options, interventions should not be instituted for the purpose of undermining existing identity commitments, even those formed in a non-reflective or foreclosed manner (Marcia, 1994). The extent to which an identity commitment serves an adaptive function may be more important than the manner in which it was formed. When a commitment is perceived as functional, there is a natural, and appropriate, resistance to efforts to change or undermine it. For instance, for some guardians or foreclosures, exploring identity issues might be threatening due to the guilt and anxiety associated with questioning introjected or internalized parental values. However, if at some future time a commitment is no longer functional, intervention or guidance might be needed for some to find personally meaningful alternatives that can provide a base for new commitments (Waterman, 1994). In the ideal case scenario, these new commitments will be personally expressive and, as such, can provide a base for self-discovery (Waterman, Chapter 16, this volume). Schwartz, Kurtines, et al. (2005) demonstrated that such a process of self-discovery can be stimulated through certain emotionally focused intervention strategies.

Marcia (1980) indicated that individuals in moratorium would be most likely to appear for counseling due to the distress associated with ongoing exploration. Instead of exploring in a systematic or a focused manner, some searchers seem to be ruminating and drifting (Luyckx, Schwartz, Goossens, et al., 2008). Consequently, their continuous exploration is associated with disappointment, depressive symptoms, and insecurity. However, for other searchers, these explorations are illuminating for self-understanding and self-discovery (Schwartz, 2002). In other words, a continuous identity search may represent a source of instability or disruption for some (Orlofsky et al., 1973), but may be beneficial

for others. However, it seems fair to say that exploration should result in commitment making at some point. So, a thorough exploration of alternatives needs to be valued, rather than discouraged, although some individuals might need some guidance through the provision of structure and autonomy support (Luyckx, Soenens, Goossens, & Vansteenkiste, 2007; see Soenens & Vansteenkiste, Chapter 17, this volume, for a review on the role of autonomy support in identity development). Individuals who present for counseling regarding identity issues might be characterized by indecisiveness or maladaptive perfectionism, which generalizes across situations and which leaves them unable to enact or maintain commitments. They experience fear when engaged in decision-making processes and, consequently, they avoid making decisions and turn to rumination or procrastination (Rassin & Muris, 2005). Such chronic decisional procrastination is likely to produce feelings of incompetence and maladaptive functioning (Luyckx et al., 2009).

---

### Conclusion

Our goal in this chapter has been to sketch some of the advantages of an explicitly process-oriented approach to personal identity (with a focus on both commitment formation and evaluation and incorporating both adaptive and maladaptive types of exploration) and to demonstrate its usefulness as a complementary approach to (and extension of) current identity research. We hope that our approach, combined with others described in this book and elsewhere, will inspire more integrative studies and advance both conceptualizations of identity and future applications of identity constructs to important social and public-health issues.

---

### Note

1. The first studies using this extended model (e.g., Luyckx et al., 2005, Luyckx, Soenens, et al., 2006) made use of two separate questionnaires (i.e., the Utrecht–Groningen

Identity Development Scale and the Ego Identity Process Questionnaire). Correlations among the four identity dimensions were substantially lower as compared to the correlations obtained with the DIDS, but this was likely due to the fact that these questionnaires assessed different identity domains to some degree. Therefore, the DIDS was developed, among other reasons, to standardize the domains across the different identity dimensions. Recent studies in the United States (e.g., Schwartz, Forthun, et al., 2010; Schwartz, Beyers, et al., in press) have started using the English version of the DIDS and assessing its reliability and validity.

## References

- Archer, S. L., & Waterman, A. S. (1990). Varieties of identity diffusions and foreclosures: An exploration of subcategories of the identity statuses. *Journal of Adolescent Research, 5*, 96–111.
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist, 55*, 469–480.
- Arnett, J. J. (2004). *Emerging adulthood: The winding road from the late teens through the twenties*. Oxford: Oxford University Press.
- Barber, B. K. (Ed.). (2002). *Intrusive parenting: How psychological control affects children and adolescents*. Washington, DC: American Psychological Association.
- Baumeister, R. F., & Muraven, M. (1996). Identity as adaptation to social, cultural, and historical context. *Journal of Adolescence, 19*, 405–416.
- Berzonsky, M. D. (1985). Diffusion within Marcia's identity-status paradigm: Does it foreshadow academic problems? *Journal of Youth and Adolescence, 14*, 527–538.
- Berzonsky, M. D., & Luyckx, K. (2008). Identity style, self-reflective cognition, and identity processes: A study of adaptive and maladaptive dimensions of self-analysis. *Identity: An International Journal of Theory and Research, 8*, 205–219.
- Beyers, W., & Goossens, L. (2008). Dynamics of perceived parenting and identity formation in late adolescence. *Journal of Adolescence, 31*, 165–184.
- Bosma, H. A. (1985). *Identity development in adolescents: Coping with commitments*. Unpublished doctoral dissertation, University of Groningen, The Netherlands.
- Bosma, H. A., & Kunnen, S. E. (2001). Determinants and mechanisms in ego identity development: A review and synthesis. *Developmental Review, 21*, 39–66.
- Burwell, R. A., & Shirk, S. R. (2007). Subtypes of rumination in adolescence: Associations between brooding, reflection, depressive symptoms, and coping. *Journal of Clinical Child and Adolescent Psychology, 36*, 56–65.
- Campbell, J. D., & Di Paula, A. (2002). Perfectionistic self-beliefs: Their relation to personality and goal pursuit. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 181–198). Washington, DC: American Psychological Association.
- Caspi, A., & Roberts, B. W. (1999). Personality continuity and change across the life course. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (2nd ed., pp. 300–326). New York: Guilford Press.
- Clancy, S. M., & Dollinger, S. J. (1993). Identity, self, and personality: I. Identity status and the five-factor model of personality. *Journal of Research on Adolescence, 3*, 227–245.
- Côté, J. E. (2000). *Arrested adulthood: The changing nature of maturity and identity*. New York: New York University Press.
- Côté, J. E. (2002). The role of identity capital in the transition to adulthood: The individualization thesis examined. *Journal of Youth Studies, 5*, 117–134.
- Côté, J. E., & Levine, C. G. (2002). *Identity formation, agency, and culture: A social psychological synthesis*. Mahwah, NJ: Erlbaum.
- Côté, J. E., & Schwartz, S. J. (2002). Comparing psychological and sociological approaches to identity: Identity status, identity capital, and the individualization process. *Journal of Adolescence, 25*, 571–586.
- Crocetti, E., Rubini, M., Luyckx, K., & Meeus, W. (2008). From three identity dimensions to five identity statuses: A study in early and middle adolescents from various ethnic groups. *Journal of Youth and Adolescence, 37*, 983–996.
- Crocetti, E., Rubini, M., & Meeus, W. H. J. (2008). Capturing the dynamics of identity formation in various ethnic groups: Development and validation of a three-dimensional model. *Journal of Adolescence, 31*, 207–222.
- Deci, E. L., & Ryan, R. M. (2002). *Handbook of self-determination research*. Rochester, NY: University of Rochester Press.
- Dunkel, C. S. (2005). The relation between self-continuity and measures of identity. *Identity: An International Journal of Theory and Research, 5*, 21–34.
- Enright, R. D., Olson, L. M., Ganiere, D., Lapsley, D. K., & Buss, R. R. (1984). A clinical model for enhancing adolescent ego identity. *Journal of Adolescence, 7*, 119–130.
- Erikson, E. (1950). *Childhood and society*. New York: Norton.
- Erikson, E. (1968). *Identity, youth and crisis*. New York: Norton.
- Ferrer-Wreder, L., Lorente, C. C., Kurtines, W., Briones, E., Busseri, J., & Berman, S., et al. (2002). Promoting

- identity development in marginalized youth. *Journal of Adolescent Research*, 17, 168–187.
- Flett, G. L., & Hewitt, P. L. (2002). Perfectionism and maladjustment: An overview of theoretical, definitional, and treatment issues. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 5–31). Washington, DC: APA.
- Grotevant, H. D. (1987). Toward a process model of identity formation. *Journal of Adolescent Research*, 2, 203–222.
- Hamacheck, D. E. (1978). Psychodynamics of normal and neurotic perfectionism. *Psychology*, 15, 27–33.
- Helson, R., & Srivastava, S. (2001). Three paths of adult development: Conservers, seekers, and achievers. *Journal of Personality and Social Psychology*, 80, 995–1010.
- Helson, R., Stewart, A. J., & Ostrove, J. (1995). Identity in three cohorts of midlife women. *Journal of Personality and Social Psychology*, 69, 544–557.
- Joireman, J. A., Parrott, L., & Hammersla, J. (2002). Empathy and the self-absorption paradox: Support for the distinction between self-rumination and self-reflection. *Self and Identity*, 1, 53–65.
- Josselson, R. (1994). The theory of identity development and the question of intervention: An introduction. In S. L. Archer (Ed.), *Interventions for adolescent identity development* (pp. 12–25). Thousand Oaks, CA: Sage.
- Josselson, R. (1996). *Revising herself: The story of women's identity from college to midlife*. Oxford: Oxford University Press.
- Kernis, M. H., Grannemann, B. D., & Barclay, L. C. (1989). Stability and level of self-esteem as predictors of anger arousal and hostility. *Journal of Personality and Social Psychology*, 56, 1013–1022.
- Kerpelman, J. L., Pittman, J. F., & Lamke, L. K. (1997). Toward a microprocess perspective on adolescent identity development: An identity control theory approach. *Journal of Adolescent Research*, 12, 325–346.
- Klimstra, T. A., Hale, W. W., Raaijmakers, Q. A. W., Branje, S. J. T., & Meeus, W. H. J. (2010). Identity formation in adolescence: Change or stability? *Journal of Youth and Adolescence*, 39, 150–162.
- Klimstra, T. A., Luyckx, K., Hale, W. W., III, Meeus, W. H. J., van Lier, P. A. C., & Frijns, T. (2010). Short term fluctuations in identity: Introducing a micro-level approach to identity formation. *Journal of Personality and Social Psychology*, 99, 191–202.
- Krettenauer, T. (2005). The role of epistemic cognition in adolescent identity formation: Further evidence. *Journal of Youth and Adolescence*, 34, 185–198.
- Kroger, J. (1995). The differentiation of “firm” and “developmental” foreclosure identity statuses: A longitudinal study. *Journal of Adolescent Research*, 10, 317–337.
- Kroger, J. (2007). *Identity development: Adolescence through adulthood* (2nd ed.). Newbury Park, CA: Sage.
- Kunnen, E. S. (2009). Qualitative and quantitative aspects of commitment development in psychology students. *Journal of Adolescence*, 32, 567–584.
- Lichtwarck-Aschoff, A., van Geert, P. L. C., Bosma, H. A., & Kunnen, E. S. (2008). Time and identity: A framework for research and theory formation. *Developmental Review*, 28, 370–400.
- Luyckx, K., Duriez, B., Klimstra, T. A., & De Witte, H. (2010). Identity statuses in young adult employees: Prospective relations with work engagement and burnout. *Journal of Vocational Behavior*, 77, 339–349.
- Luyckx, K., Goossens, L., & Soenens, B. (2006). A developmental contextual perspective on identity construction in emerging adulthood: Change dynamics in commitment formation and commitment evaluation. *Developmental Psychology*, 42, 366–380.
- Luyckx, K., Goossens, L., Soenens, B., & Beyers, W. (2006). Unpacking commitment and exploration: Preliminary validation of an integrative model of late adolescent identity formation. *Journal of Adolescence*, 29, 361–378.
- Luyckx, K., Goossens, L., Soenens, B., Beyers, W., & Vansteenkiste, M. (2005). Identity statuses based upon four rather than two identity dimensions: Extending and refining Marcia's paradigm. *Journal of Youth and Adolescence*, 34, 605–618.
- Luyckx, K., Goossens, E., Van Damme, C., & Moons, P. (2010). *Identity formation in adolescents with congenital heart disease: A forgotten issue in the transition to adulthood*. Manuscript submitted for publication.
- Luyckx, K., Lens, W., Smits, I., & Goossens, L. (2010). Time perspective and identity formation: Short-term longitudinal dynamics in college students. *International Journal of Behavioral Development*, 34, 238–247.
- Luyckx, K., Schwartz, S. J., Berzonsky, M. D., Soenens, B., Vansteenkiste, M., & Smits, I., et al. (2008). Capturing ruminative exploration: Extending the four-dimensional model of identity formation in late adolescence. *Journal of Research in Personality*, 42, 58–82.
- Luyckx, K., Schwartz, S. J., Goossens, L., & Pollock, S. (2008). Employment, sense of coherence, and identity formation: Contextual and psychological processes on the pathway to sense of adulthood. *Journal of Adolescent Research*, 23, 566–591.
- Luyckx, K., Schwartz, S. J., Goossens, L., Soenens, B., & Beyers, W. (2008). Developmental typologies of identity formation and adjustment in emerging adulthood: A latent class growth analysis approach. *Journal of Research on Adolescence*, 18, 595–619.
- Luyckx, K., Seiffge-Krenke, I., Schwartz, S. J., Goossens, L., Weets, I., & Hendrieckx, C., et al. (2008). Identity development, coping, and adjustment in emerging adults with a chronic illness: The sample case of type 1 diabetes. *Journal of Adolescent Health*, 43, 451–458.
- Luyckx, K., Soenens, B., & Goossens, L. (2006). The personality-identity interplay in emerging adult women: Convergent findings from complementary analyses. *European Journal of Personality*, 20, 195–215.

- Luyckx, K., Soenens, B., Goossens, L., Beckx, K., & Wouters, S. (2008). Identity exploration and commitment in late adolescence: Correlates of perfectionism and mediating mechanisms on the pathway to well-being. *Journal of Social and Clinical Psychology, 27*, 336–361.
- Luyckx, K., Soenens, B., Goossens, L., & Vansteenkiste, M. (2007). Parenting, identity formation, and college adjustment: A mediation model with longitudinal data. *Identity: An International Journal of Theory and Research, 7*, 309–331.
- Luyckx, K., Soenens, B., Vansteenkiste, M., Goossens, L., & Berzonsky, M. D. (2007). Parental psychological control and dimensions of identity formation in emerging adulthood. *Journal of Family Psychology, 21*, 546–550.
- Luyckx, K., Vansteenkiste, M., Goossens, L., & Duriez, B. (2009). Basic need satisfaction and identity formation: Bridging self-determination theory and process-oriented identity research. *Journal of Counseling Psychology, 56*, 276–288.
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology, 3*, 551–558.
- Marcia, J. E. (1980). Identity in adolescence. In J. Adelson (Ed.), *Handbook of adolescent psychology* (pp. 159–187). New York: Wiley.
- Marcia, J. E. (1989). Identity diffusion differentiated. In M. A. Luszcz & T. Nettelbeck (Eds.), *Psychological development: Perspectives across the life-span* (pp. 123–137). Dordrecht, The Netherlands: Elsevier.
- Marcia, J. E. (1993). The status of the statuses: Research review. In J. E. Marcia, A. S. Waterman, D. R. Matteson, S. L. Archer, & J. L. Orlofsky (Eds.), *Identity: A handbook for psychosocial research* (pp. 22–41). New York: Springer.
- Marcia, J. E. (1994). Identity and psychotherapy. In S. L. Archer (Ed.), *Interventions for adolescent identity development* (pp. 29–46). Thousand Oaks, CA: Sage.
- Marcia, J. E. (2002). Identity and psychosocial development in adulthood. *Identity: An International Journal of Theory and Research, 2*, 7–28.
- Markstrom-Adams, C., Ascione, F. R., Braegger, D., & Adams, G. R. (1993). Promotion of ego-identity development: Can short-term intervention facilitate growth? *Journal of Adolescence, 16*, 217–224.
- Meeus, W. (1996). Studies on identity development in adolescence: An overview of research and some new data. *Journal of Youth and Adolescence, 25*, 569–598.
- Meeus, W. H. J., Iedema, J., Helsen, M., & Vollebergh, W. (1999). Patterns of adolescent identity development: Review of literature and longitudinal analysis. *Developmental Review, 19*, 419–461.
- Meeus, W., van de Schoot, R., Keijsers, L., Schwartz, S. J., & Branje, S. (2010). On the progression and stability of adolescent identity formation: A five-wave longitudinal study in early-to-middle and middle-to-late adolescence. *Child Development, 81*, 1565–1581.
- Nelson, L. J., & Barry, C. M. (2005). Distinguishing features of emerging adulthood: The role of self-classification as an adult. *Journal of Adolescent Research, 20*, 242–262.
- Nolen-Hoeksema, S. (2000). The role of rumination in depressive disorders and mixed anxiety/depressive symptoms. *Journal of Abnormal Psychology, 109*, 504–511.
- Obeidallah, D. A., Hauser, S. T., & Jacobson, A. M. (1999). The long branch of phase-environment fit: Concurrent and longitudinal implications of match ad mismatch among diabetic and nondiabetic youth. *Journal of Adolescent Research, 14*, 95–121.
- Orlofsky, J. L., Marcia, J. E., & Lesser, I. M. (1973). Ego identity status and the intimacy versus isolation crisis of young adulthood. *Journal of Personality and Social Psychology, 27*, 211–219.
- Pals, J. L. (1999). Identity consolidation in early adulthood: Relations with ego-resiliency, the context of marriage, and personality change. *Journal of Personality, 67*, 295–329.
- Rassin, E., & Muris, P. (2005). To be or not to be . . . indecisive: Gender differences, correlations with obsessive-compulsive complaints, and behavioural manifestation. *Personality and Individual Differences, 38*, 1175–1181.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*, 1069–1081.
- Schwartz, S. J. (2001). The evolution of Eriksonian and neo-Eriksonian identity theory and research: A review and integration. *Identity: An International Journal of Theory and Research, 1*, 7–58.
- Schwartz, S. J. (2002). In search of mechanisms of change in identity development: Integrating the constructivist and discovery perspective on identity. *Identity: An International Journal of Theory and Research, 2*, 317–339.
- Schwartz, S. J. (2005). A new identity for identity research: Recommendations for expanding and refocusing the identity literature. *Journal of Adolescent Research, 20*, 293–308.
- Schwartz, S. J., Beyers, W., Luyckx, K., Soenens, B., Zamboanga, B. L., Forthun, L. F., et al. (in press). Examining the light and dark sides of emerging adults' identity: A study of identity status differences in positive and negative psychosocial functioning. *Journal of Youth and Adolescence*.
- Schwartz, S. J., Côté, J. E., & Arnett, J. J. (2005). Identity and agency in emerging adulthood: Two developmental routes in the individualization process. *Youth and Society, 37*, 201–229.
- Schwartz, S. J., Forthun, L. F., Ravert, R. D., Zamboanga, B. L., Rodriguez, L., & Umaña-Taylor, A. J., et al. (2010). The protective role of identity consolidation against health risk behaviors in college-attending emerging adults. *American Journal of Health Behavior, 34*, 214–224.

- Schwartz, S. J., Klimstra, T. A., Luyckx, K., Hale III, W. W., Frijns, T., Oosterwegel, A., et al. (in press). Daily dynamics of personal identity and self-concept clarity. *European Journal of Personality*.
- Schwartz, S. J., Kurtines, W. M., & Montgomery, M. J. (2005). A comparison of two approaches for facilitating identity exploration processes in emerging adults: An exploratory study. *Journal of Adolescent Research, 20*, 309–345.
- Schwartz, S. J., Mullis, R. L., Waterman, A. S., & Dunham, R. M. (2000). Ego identity status, identity style, and personal expressiveness: An empirical investigation of three convergent constructs. *Journal of Adolescent Research, 15*, 504–521.
- Schwartz, S. J., Zamboanga, B. L., Weisskirch, R. S., & Rodriguez, L. (2009). The relationships of personal and ethnic identity exploration to indices of adaptive and maladaptive psychosocial functioning. *International Journal of Behavioral Development, 33*, 131–144.
- Segerstrom, S. C., Tsao, J. C. I., Alden, L. E., & Craske, M. G. (2000). Worry and rumination: Repetitive thought as a concomitant and predictor of negative mood. *Cognitive Therapy and Research, 24*, 671–688.
- Shafraan, R., & Mansell, W. (2001). Perfectionism and psychopathology: A review of research and treatment. *Clinical Psychology Review, 21*, 879–906.
- Soenens, B., Luyckx, K., Vansteenkiste, M., & Goossens, L. (2008). Clarifying the link between parental psychological control and adolescents' depressive feelings: A test of reciprocal versus unidirectional models of influence. *Merrill-Palmer Quarterly, 54*, 411–444.
- Soenens, B., Vansteenkiste, M., Lens, W., Luyckx, K., Goossens, L., & Beyers, W., et al. (2007). Conceptualizing parental autonomy support: Adolescent perceptions of promotion of independence versus promotion of volitional functioning. *Developmental Psychology, 43*, 633–646.
- Stephen, J., Fraser, E., & Marcia, J. E. (1992). Moratorium-achievement (Mama) cycles in lifespan identity development: Value orientations and reasoning system correlates. *Journal of Adolescence, 15*, 283–300.
- Super, D. E. (1990). The life-span, life-space approach to career development. In D. Brown, L. Brooks, & Associates (Eds.), *Career choice and development: Applying contemporary theories to practice* (2nd ed., pp. 197–261). San Francisco: Jossey-Bass.
- Trapnell, P. D., & Campbell, J. D. (1999). Private self-consciousness and the five-factor model of personality: Distinguishing rumination from reflection. *Journal of Personality and Social Psychology, 76*, 284–304.
- Treynor, W., Gonzalez, R., & Nolen-Hoeksema, S. (2003). Rumination reconsidered: A psychometric analysis. *Cognitive Therapy and Research, 27*, 247–259.
- Ward, A., Lyubomirsky, S., Sousa, L., & Nolen-Hoeksema, S. (2003). Can't quite commit: Rumination and uncertainty. *Personality and Social Psychology Bulletin, 29*, 96–107.
- Waterman, A. S. (1982). Identity development from adolescence to adulthood: An extension of theory and a review of research. *Developmental Psychology, 18*, 341–358.
- Waterman, A. S. (1990). Personal expressiveness: Philosophical and psychological foundations. *Journal of Mind and Behavior, 11*, 47–74.
- Waterman, A. S. (1992). Identity as an aspect of optimal psychological functioning. In G. R. Adams, T. P. Gullotta, & R. Montemayor (Eds.), *Adolescent identity formation* (pp. 50–72). Newbury Park, CA: Sage.
- Waterman, A. S. (1994). Ethical considerations in interventions for promoting identity development. In S. L. Archer (Ed.), *Interventions for adolescent identity development* (pp. 231–244). Thousand Oaks, CA: Sage.
- Waterman, A. S. (2007). Doing well: The relationship of identity status to three conceptions of well-being. *Identity: An International Journal of Theory and Research, 7*, 289–307.
- Waterman, A. S., Schwartz, S. J., Goldbacher, E., Green, H., Miller, C., & Philip, S. (2003). Predicting the subjective experience of intrinsic motivation: The roles of self-determination, the balance of challenges and skills, and self-realization values. *Personality and Social Psychology Bulletin, 29*, 1447–1458.
- Worthington, R. L., Navarro, R. L., Savoy, H. B., & Hampton, D. (2008). Development, reliability, and validity of the measure of sexual identity exploration and commitment (MoSIEC). *Developmental Psychology, 44*, 22–33.
- Zimbardo, P. G., Keough, K. A., & Boyd, J. N. (1997). Present time perspective as a predictor of risky driving. *Personality and Individual Differences, 23*, 1007–1023.