Abstract

Studies on identity formation focus on various components of identity. However, these components have mainly been studied separately, and researchers in different fields are not always aware of each other's work. Therefore, this systematic review provides an overview of theories and empirical studies on three key components of identity: distinctiveness (seeing the self as unique and distinct from others), coherence (perceiving the self as similar across life domains), and continuity (perceiving the self as the same person over time). This systematic review focused on the development of these components and linkages with psychosocial functioning. Findings suggest important differences between the three identity components. Therefore, we propose an integrative developmental framework of identity, including all three identity components and their linkages.

Keywords: identity, distinctiveness, coherence, continuity

A Review and Integration of Three Key Components of Identity Development: Distinctiveness, Coherence, and Continuity

The importance of establishing a clear identity is widely recognized in different developmental theories (e.g., Arnett, 2000; Erikson, 1968; Kernberg & Caligor, 2005). Yet, studies on identity formation vary substantially in their emphases and approaches. Some studies focus on identity content, whereas others focus on the structure or processes of identity formation (McLean, Syed, & Shucard, 2016). Moreover, studies differ in their conceptualization of identity. Overall, three core components have been recognized: distinctiveness (seeing the self as unique and distinct from others), coherence (perceiving the self as similar across domains), and continuity (perceiving the self as the same person over time; Pasupathi, 2014).

The distinction between distinctiveness, coherence, and continuity dates back to Erikson (1968). For example, he noted that “the final identity … is superordinated to any single identification with individuals of the past: it includes all significant identifications, but it also alters them in order to make a unique and reasonably coherent whole of them” (p. 161). This definition illustrates that the formation of a set of identity commitments contributes to experiencing the self as distinct from others. Furthermore, Erikson (1968) emphasized that the feeling of having a personal identity is based on “the perception of the selfsameness and continuity of one’s existence in time and space” (p. 50). This demonstrates Erikson’s notion that identity provides individuals with a sense of continuity across time and coherence across contexts (referred to as “spaces” by Erikson).

Today, distinctiveness, coherence, and continuity are still central to the conceptualization of identity (Pasupathi, 2014). However, different identity components have been studied in different research fields. That is, the concept of identity distinctiveness has mainly been studied

in social and clinical psychology. Identity coherence is often a topic in developmental, social, and personality psychology. Finally, identity continuity is mainly studied in developmental psychology and within narrative research traditions (Pasupathi, 2014).

What makes matters worse is that these components have mainly been studied separately with researchers in various fields not always being aware of each other's work, whereas integrating all three components in one model would advance the study of identity (Pasupathi, 2014). To facilitate changes to this unfortunate situation, we first provide a systematic overview of theoretical and empirical studies on these identity components in adolescence and young adulthood. Second, we present an integrative developmental framework that clarifies how these different identity components are interrelated.

The Present Review

We used the PsycINFO and Web of Science databases to retrieve empirical studies on distinctiveness, coherence, and continuity. First, we applied various search terms for each component. For distinctiveness, we used the terms 'self-other differentiation', 'distinct self', 'personal uniqueness', and variations on these. This resulted in 70 hits. For coherence, we used the terms 'identity consistency', 'self-concept differentiation', 'differentiation of the self', and 'spatial continuity and (identity or self)', resulting in 102 hits. For continuity, we used the terms 'identity commitment', 'continuity', 'sense of continuity', which resulted in 152 hits. Our search and selection of papers was restricted to the age groups adolescence and young adulthood, and to peer-reviewed, English-language, and quantitative studies. From the retrieved studies, we selected studies on (a) the development of a component and/or (b), the link between one component and psychosocial functioning, and/or (c) the link between the components. In a second step, we checked the articles that cited key studies on the development of measures to

assess these identity components. A list of all selected studies is available as online supplementary material S4.

Identity Distinctiveness

Theoretical Models

Already in the first years of life, individuals start perceiving themselves as unique and distinct from others (for an overview see Harter, 2012). For example, around 18 months of age, individuals can recognize themselves in a mirror (Rochat, 2003). These early developments result in the awareness that the self and others exist and have different physical characteristics. However, in adolescence the distinction between self and others becomes more detailed, as individuals start recognizing their own traits, goals, and values (Harter, 2012).

In addition to Erikson (1968), various theories have described the importance of constructing a unique identity that provides a sense of distinctiveness during adolescence. For example, Vignoles' (2011) motivated identity construction theory holds that individuals are universally motivated to construct an identity that differentiates themselves from others. The motive to see oneself as distinct can thus push people to construct their identity in a way that distinguishes them.

However, uniqueness theory (Snyder & Fromkin, 1980) indicates that feeling too distinct might be problematic. This theory states that uniqueness (or distinctiveness) is a common dimension on which people define themselves. This means that most people compare themselves to others, and as a result perceive a certain degree of distinctiveness. The experience of a moderate sense of distinctiveness would be most adaptive. Both being overly similar or distinctive would result in negative emotions.

Feeling extremely distinct is theorized to be more common during adolescence. According to Elkind (1967), adolescents tend to believe in a personal fable, which entails that they are unique. This feeling of uniqueness is so extreme that adolescents would believe others can never understand them. According to Lapsley, FitzGerald, Rice, and Jackson (1989) the personal fable might help adolescents in their striving to become more independent, because feeling distinct can help to create boundaries between the self and others (Blos, 1967). Thus, feeling extremely distinct should be more common in adolescence, but all abovementioned theories indicate that achieving a sense of distinctiveness is an important normative developmental task.

Theories with a psychopathological perspective have focused on the role of an extreme lack of distinctiveness between self and others. Kernberg's theory on pathological personality organizations suggests that an extreme lack of distinctiveness results in an inability to distinguish between experiences, emotions, and thoughts of the self and those of others (i.e., psychotic personality organization; Kernberg & Caligor, 2005). This way, a pathological lack of distinctiveness could result in psychotic states, as also suggested by Erikson (1968) and Blos (1967). Accordingly, an extreme lack of distinctiveness and overidentification with others is referred to as one of the core elements of impairment in personality functioning in the alternative model on personality disorders in DSM-5 (American Psychiatric Association, 2013).

Although the aforementioned theories highlight the importance of distinctiveness in various ways, they are not contradicting each other. Collectively, these theories indicate that having a distinct identity is important (i.e., motivated identity construction theory and uniqueness theory). Lacking distinctiveness could involve an absence of boundaries between the self and others, and result in psychotic symptoms (i.e., Kernberg's theory of personality organization).

However, feeling too distinct from others might have negative consequences (i.e., uniqueness theory) and potentially entail the negative feeling that others would never be able to understand you (i.e., personal fable).

Empirical Evidence on Development

Selected studies on distinctiveness are listed in online supplementary material Table S1. We found no longitudinal studies on the development of distinctiveness across adolescence and young adulthood, but some cross-sectional studies investigated mean-level, age-related, or grade-related differences. These studies varied in the measure of distinctiveness they used, with some focusing more on the extremes and others on more moderate levels. Nevertheless, they are consistent in finding no significant age differences during adolescence (e.g., Aalsma, Lapsley, & Flannery, 2006) or young adulthood (Lopez, 2001), or between adolescence and young adulthood (e.g., Neff & McGehee, 2010). Thus, there appears to be little support for an adolescent peak in distinctiveness as was predicted by the theory on the personal fable (Elkind, 1967).

The aforementioned studies all used subjective indicators of distinctiveness. Adams-Webber (1985) used a more objective indicator, based on Kelly's (1955) repertory grid technique[1]. He showed an increase in the distinction between descriptions of self and others across childhood and adolescence. Still, all aforementioned studies on distinctiveness were cross-sectional. Longitudinal studies are necessary to provide information on the stability and developmental trajectories of distinctiveness across adolescence and young adulthood.

Empirical Evidence on the Link with Psychosocial Functioning

[1] With the Repertory Test, one can study the personal constructs individuals use to distinguish people from each other. In the test, individuals specify the differences and similarities they perceive between themselves and several others from their daily lives. Based on this, the degree of distinctiveness between the self and the others can be examined.

Many studies on distinctiveness have focused on associations with psychosocial functioning. Findings support the idea that perceiving elements of the self as distinctive is important for individuals, because distinctive elements are regarded as more self-defining (Becker et al., 2012). Other studies focused on the degree to which individuals indicate feeling overall more distinct. Some of these studies focused on normative feelings of distinctiveness (e.g., Şimşek & Yalınçetin, 2010), whereas others zoomed in on one of the extreme ends. Generally, studies assessing more extreme levels of distinctiveness also incorporate aspects of psychosocial functioning that are theorized to accompany these levels. For example, measures tapping into the personal fable of extreme uniqueness also assess feelings of being misunderstood by others (e.g., Lapsley et al., 1989). Contrary to this, an often used measure on a lack of distinctiveness also assesses dependency on others and emotional reactivity to others' emotions (Olver, Aries, & Batgos, 1989).

Assuming that these measures together represent an underlying continuum of the degree of distinctiveness, careful comparisons of these studies seem to suggest a curvilinear relationship between distinctiveness and psychosocial functioning. However, note that this pattern was inferred from studies using different measures, focusing on different degrees of distinctiveness, and examining linear associations. Findings suggested a curvilinear pattern for the association with internalizing symptoms. Studies focusing on more normative feelings of distinctiveness found a negative association with internalizing symptoms (Şimşek & Yalınçetin, 2010). Yet, internalizing symptoms were more common among young people who reported extremely low (Ingoglia, Lo Coco, & Albiero, 2016) or extremely high distinctiveness (Aalsma et al., 2006; Goossens, Beyers, Emmen, & Van Aken, 2002; Neff & McGehee, 2010).

Furthermore, young people who reported more normative levels of distinctiveness perceived their actions as more self-endorsed and also felt more related to others (Şimşek & Yalınçetin, 2010). Lacking distinctiveness was moderately associated with making less self-endorsed choices, behaving less volitionally, and being more emotionally detached from parents (Ingoglia, Lo Coco, Liga, & Grazia Lo Cricchio, 2011). Feeling extremely distinct was also associated with processes of separation and individuation (Galanaki & Christopoulos, 2011), but more with the maladaptive processes, and less with the more adaptive processes (Goossens et al., 2002). Correspondingly, individuals who feel highly distinct feel less securely attached and more lonely (Goossens et al., 2002; Neff & McGehee, 2010). Overall, these findings suggest that having a moderate sense of distinctiveness is most adaptive for adolescents and young adults. Future studies could examine these expected curvilinear associations.

Identity Coherence

Theoretical Models

A second important component of identity is feeling coherent across various life domains, as reflected in Erikson's (1968) notion about self-sameness across spaces. Other theories refer to coherence as role variability (Block, 1961), self-concept differentiation (Donahue, Robins, Roberts, & John, 1993), spatial integration (Van Hoof & Raaijmakers, 2003), and coherence (Pasupathi, 2014). Although some of these theories focus on coherence across roles and others across contexts, they all seem to refer to identity coherence across various identity-relevant domains. Additionally, sense of coherence has been used to refer to the more general feeling that one's life experiences and the world are coherent (Antonovsky & Sagey, 1986). In this review, we did not include studies focusing on this broad conceptualization of coherence, because we focus specifically on coherence of the self (across domains).

Young people develop their identity in various identity-relevant domains, such as education, work, friendships, and romantic relationships (e.g., Goossens, 2001; Grotevant, Thorbecke, & Meyer, 1982). However, even when an adolescent succeeds in constructing a clear identity in two different domains, this is not sufficient to achieve identity coherence across these domains (Syed & McLean, 2016). Coherence entails that these domains are integrated and that individuals perceive themselves to be similar when engaging in them. For example, a coherent individual would not only feel extraverted and optimistic when at school, but also when playing soccer.

Identity coherence can be achieved by integrating new aspects of identities with already existing ones, and by redefining or excluding present domain-specific identities (Van Hoof & Raaijmakers, 2003). New identity domains become important during development, such as occupation during young adulthood (Arnett, 2000), which makes continuously working on the integration of new and old identity elements crucial.

During adolescence, individuals likely become aware of conflicting aspects of the self (Harter, 2012). Although these conflicts are first not experienced as problematic, from middle adolescence onwards, inconsistencies are thought to become distressing (Harter, 2012), and thus associated with psychosocial functioning. However, various perspectives exist on this link (see Donahue et al., 1993). On the one hand, having a differentiated sense of self across various domains could indicate flexibility. An individual who can adapt to the varying requirements of domains, such as being more extraverted when necessary, might function better. On the other hand, by acting differently across domains individuals could experience fragmentation. Because both extremes of coherence can have maladaptive consequences, Block (1961) expected a curvilinear association between coherence and psychosocial functioning.

Empirical Evidence on Development

Studies on coherence typically examine participants' ratings of to what extent various traits describe them in various domains. Subsequently, coherence scores are computed using principal component analysis or correlations. These scores reflects the (un)shared variance in traits across domains (e.g., Donahue et al., 1993). However, such scores might be invalid, because they also depend on irrelevant variance within domains and are confounded with mean scores on traits (Baird, Le, & Lucas, 2006). Therefore, from the studies that used these computations to assess coherence, we only selected those that used the corrected index of Baird et al. (2006). Selected studies on coherence are listed in online supplementary material Table S2. The corrected coherence index has not yet been used in studies on the development of coherence in adolescence or young adulthood.

Another way to assess experiences of coherence is by letting individuals point out conflicting aspects of themselves across various roles (Harter & Monsour, 1992). One study using such a measure has shown that compared to early adolescents, middle adolescents were more often able to mention conflicting self-aspects (Harter & Monsour, 1992). However, more recent studies did not find age differences in the number of reported conflicting self-aspects across adolescence (e.g., Shadel, Tharp-Taylor, & Fryer, 2009). Unfortunately, these studies had small sample sizes, which could have resulted in less reliable findings.

Empirical Evidence on the Link with Psychosocial Functioning

Various studies have examined the association between coherence and psychosocial functioning using measures that were later criticized (Baird et al., 2006). A meta-analysis including these measures, and not restricted to any age group, showed that coherence was positively linked to well-being, life satisfaction, and self-esteem, and negatively linked to

depressive symptoms and anxiety (Bleidorn & Ködding, 2013). These links were stronger in samples from more individualistic countries. Van Hoof and Raaijmakers (2002) focused on adolescent samples, and also found a positive link of coherence with well-being. They further showed that linear associations better explained the relationships, compared to curvilinear associations.

These studies used non-corrected indices, which could overestimate the association with well-being (Baird et al., 2006). If these flaws are corrected for, associations with self-esteem, life satisfaction, and self-concept clarity tend to disappear (Baird et al., 2006; Dunkel, Minor, & Babineau, 2010; Fukushima & Hosoe, 2011). The negative association of coherence with negative affect was also significantly reduced when using this corrected index, resulting in small or non-significant associations (Baird et al., 2006; Dunkel et al., 2010). Yet, this corrected index of coherence was still negatively associated with narcissism (Fukushima & Hosoe, 2011). However, in a recent study, Baird, Lucas, and Donnellan (2017) have raised concerns that even when using the corrected index of coherence, it is possible that these scores are substantially affected by response style.

In sum, there is no convincing evidence for associations between coherence and psychosocial functioning. Studies have examined the adaptiveness of coherence primarily by looking at sameness across identity domains. Possibly, inconsistencies across domains are only maladaptive if they really produce a conflict between domains (Baumeister, Shapiro, & Tice, 1985). For example, an adolescent might not experience it as problematic to be more conscientious at school compared to home. However, having a same-sex romantic partner, but hiding this at school because of doubts about peer-approval, might have maladaptive influences on psychosocial functioning.

Identity Continuity

Theoretical Models

Erikson (1950, 1968) explained that a key asset of an identity is that it provides a sense of sameness and continuity. Continuity refers to adolescents' experience of being the same person today, compared to what one has been in the past and will be in the future (e.g., Van Hoof, 1999). Note that continuity does not necessarily precludes change (Vignoles, Regalia, Manzi, Golledge, & Scabini, 2006). Individuals who experience certain turning points and change are still able to experience continuity of the self as well. A lack of continuity is thought to result in role confusion (Erikson, 1950). In adolescence and young adulthood, individuals experience many changes across different life domains, such as their social relationships and education. Consequently, they need to develop a new sense of sameness continuity by establishing strong commitments within different identity domains (Arnett, 2000; Erikson, 1968).

Marcia's (1966) identity status model is the most widely used model to elaborate on Erikson's (1968) theoretical ideas and provides a way to assess identity continuity (Waterman, 1988). Marcia distinguished the two key processes of exploration and commitment. Exploration indicates to what extent individuals consider various alternative identity commitments. Commitment indicates to what extent firm choices in important identity domains have been made, and whether significant activities are conducted to implement these choices. Based on the presence/absence of exploration and commitment, individuals can be classified into four different identity statuses. The achievement status reflects strong commitments after a period of active exploration. Foreclosed individuals have made a commitment with little or no prior exploration. The moratorium status indicates that individuals have high levels of exploration, but

have not yet made a commitment. Finally, diffused individuals have not engaged in active identity exploration and have not made commitments.

Marcia's (1966) identity status paradigm provided a way to classify people rather than studying how identity formation processes take place within individuals across time (Crocetti, Rubini, & Meeus, 2008; Waterman, 1982). Contemporary European dual-cycle models do aim to study the developmental process of identity formation (Crocetti et al., 2008; Luyckx, Goossens, & Soenens, 2006). These models distinguish specific exploration dimensions, such as exploration in-depth and exploration in-breadth (Crocetti et al., 2008; Luyckx et al., 2006) and specific commitment dimensions (e.g., commitment making and identification with commitments; Luyckx et al., 2006) to capture an identity *formation* cycle and an identity *maintenance* cycle.

Empirical Evidence on Development

Studies on identity continuity identified in this review are listed in online supplementary material Table S3. Different measurements to assess identity continuity have been used. Most often, a subjective sense of identity continuity is operationalized by measuring identity commitments. This emphasis on the assessment of identity commitments is consistent with Erikson's conceptualization that forming commitments serves the function of creating a sense of continuity during life changes and provides direction and structure for a person's future (Pasupathi, 2014). In addition, alternative measurements of identity continuity have been identified (e.g., Vignoles et al., 2006). Studies that have used these measurements will be discussed after a review on studies on identity commitments.

Meeus (2011) reviewed the literature on longitudinal research on identity commitments published between 2000 and 2010. Hence, we will extend Meeus' (2011) review by including

longitudinal studies on identity commitment published after 2010. Meeus (2011) concluded from longitudinal studies on identity dimensions that during adolescence and young adulthood identity commitment increases. In addition, findings from identity status research, conducted before 2011, point to the same direction of increasing identity continuity as well. Specifically, these studies report a systematic decrease in the prevalence of identity statuses characterized by low commitment levels, and an increase in identity statuses showing high commitment levels and low identity uncertainty (Meeus, 2011). For example, the number of adolescents in identity diffusion and moratorium decreases over time, whereas the number of adolescents in identity foreclosure or achievement statuses increases during adolescence (Meeus, Van de Schoot, Keijsers, Schwartz, & Branje, 2010).

After 2010, nine additional longitudinal studies on the development of identity commitments were identified. These studies used either a dimensional approach by studying the development of separate identity dimensions (i.e., the development of identity commitment) or an identity status approach by testing over-time configurations of identity commitments, and levels of exploration, for example. Table S3 in the online supplementary material shows that the majority of studies on identity dimensions and identity statuses reported stable or increasing identity continuity over time. For example, using a dimensional approach, Shirai, Nakamura, and Katsuma (2016) showed that young adults' general level of identity commitments remained stable over time.

Studies focusing on identity statuses revealed that many young people can be classified in identity status trajectories characterized by high levels of commitment in adolescence (i.e., 55% in achievement or closure; Meeus, Van de Schoot, Keijsers, & Branje, 2012), as well as in young adulthood (i.e., 43% in achievement or closure; Luyckx, Klimstra, Schwartz, & Duriez, 2013).

Within these trajectories, commitment strength was generally stable across time. Furthermore, the number of adolescents in identity statuses characterized by high levels of commitments (and thus high levels of perceived continuity) further increased from early to late adolescence (Hirschi, 2012; Meeus et al., 2012). For example, the number of identity diffused youth was significantly lower and the number of achieved youth higher in later adolescence compared to earlier adolescence (Meeus et al., 2012). Thus, adolescents generally seem to maintain or further develop feelings of identity continuity through adolescence.

Whereas these studies most often assessed identity annually or biannually, recent work investigated daily identity developmental processes (Becht et al., 2016). Two trajectories, each containing about 50% of the total adolescent sample, were identified. An identity synthesis class was characterized by relatively high and stable commitment levels and low levels of daily identity reconsideration. However, the other class showed a pattern of continuously searching for identity continuity and temporal identity discontinuity. These adolescents had low levels of identity commitment that slightly decreased and subsequently increased during adolescence. In sum, findings suggest that perceived identity continuity operates at the daily level as well as across longer periods.

In addition to studies examining identity commitments to understand identity continuity, a second tradition focused more on understanding identity continuity phenomenologically. In the latter tradition, adolescents' sense of continuity is measured directly by asking participants whether they still perceive themselves to be the same person today as before, despite the fact that time passes and they are changing (e.g., Habermas & Köber, 2015; Pilarska & Suchańska, 2015a). Only one study was found that investigated mean levels of self-discontinuity (inverse coded assessment of continuity) across different age groups (Habermas & Köber, 2015). This

study reported that across adolescence and young adulthood, feelings of self-discontinuity decreased. Hence, continuity increased during adolescence and young adulthood.

Together these findings indicate that adolescents and young adults who are strongly committed often maintain these high levels of commitment across the years. Moreover, some empirical findings also indicate a strengthening of commitments among adolescents with relatively weak commitments. This maintenance and strengthening of commitments might explain the increasing level of sense of continuity across adolescence and young adulthood.

Empirical Evidence on the Link with Psychosocial Functioning

Across the board, findings showed that young people who reported strong identity commitments reported the highest levels of adjustment, like also concluded by Meeus (2011). For example, adolescents in identity status trajectories characterized by high levels of commitments reported lowest levels of delinquency, depressive symptoms, and anxiety (Becht et al., 2016; Meeus et al., 2012). Moreover, both transitioning to a status characterized by high levels of commitment, as well as staying in a high-commitment status was generally associated with an increase in well-being (Hirschi, 2012). Some findings showed that strong commitments could predict relative increases in adjustment over time, such as in the quality of family relationships (Crocetti, Branje, Rubini, Koot, & Meeus, 2017). Furthermore, support was also found for reversed effects, in which diminished adjustment (e.g., delinquency) seemed to hamper the construction of strong commitments (Mercer, Crocetti, Branje, Van Lier, & Meeus, 2017).

Studies including different measures of identity continuity showed similar findings. For example, Pilarska (2014) and Pilarska and Suchańska (2015a) assessed sense of continuity with questions on the sense of constancy of the self and being the same person, despite changes going on within the person and the passage of time. They found that adolescents with higher feelings of

continuity reported less negative affect, higher life satisfaction, and more sense of self-worth. Other research used a questionnaire developed by Vignoles et al. (2006) to assess identity continuity and associations with adjustment. For example, Batory (2014) showed that the more an identity element provided young adults with a sense of continuity, the more central this element was for an individual's identity as well. Batory (2015) experimentally induced a threat to identity. A near-significant effect indicated that the more the identity element provided young adults with a sense of continuity, the more positive affect they experienced in reaction to an identity threat. This finding suggests that identity continuity might buffer against potential danger to destabilize one's identity.

In sum, studies using different questionnaires to assess identity continuity indicate that those adolescents and young adults who experience identity discontinuity report having more adjustment difficulties compared to individuals who established firm commitments and feelings of identity continuity over time.

Integrative Developmental Framework of Identity

Development of Three Identity Components

Our review discussed three core components of identity. Next, we aimed to integrate these key components into a developmental framework of identity. Regarding the development of identity, it is likely that adolescents start with questioning what distinguishes them from others. According to Pasupathi (2014), distinctiveness indeed provides a foundation from which identity coherence and continuity can develop. This notion is further supported by the fact that a rudimentary sense of distinctiveness from others already develops in childhood (see Harter, 2012). Moreover, one could argue that in order to experience coherence and continuity, one first needs to have a sense of 'I'. The reviewed studies showed that across adolescence and young

adulthood, no significant age differences exist in mean levels of distinctiveness. This supports the idea that for most individuals a sense of distinctiveness is already established at the start of adolescence.

Distinctiveness can be considered foundational, but all three components might strengthen each other equally later in adolescence. Feeling the same person across contexts and time may also contribute to feeling more distinctive. If distinctiveness is foundational for identity formation in early adolescence and later strengthened by the construction of coherence and continuity, distinctiveness should be associated with coherence and continuity. So far, only three cross-sectional studies with young adults examined these associations. Findings indicated that distinctiveness was weakly or not significantly associated with continuity (Pilarska, 2014; Pilarska & Suchańska, 2015a) and not significantly associated with coherence (Pilarska & Suchańska, 2015b). In this latter study, a coherence index that is confounded with mean scores on traits was used, but as this index is known for overestimating adjustment it seems unlikely that a corrected index would result in a significant association. However, these studies only focused on linear associations with more normative feelings of distinctiveness. It is possible that an optimal dose effect of distinctiveness on coherence and continuity exists, with levels of distinctiveness that are too high jeopardizing feelings of coherence and continuity. For example, feeling highly distinct can be uncomfortable and could therefore trigger reconsideration of aspects of one's identity. To detect such effects, future studies need to examine non-linear associations between identity components.

Concerning the linkages between coherence and continuity, Van Hoof and Raaijmakers (2002) indicated that identity coherence is a necessary condition before one can develop a sense of continuity because by moving through time, one will be active in various domains. Although

this may be true, a general sense of continuity as provided by commitments might also provide a good starting point to align identities across different domains into a coherent whole.

Our review showed mixed empirical evidence for the development of coherence across adolescence. Although there seems to be an increase during adolescence in the awareness of conflicting aspects (Harter & Monsour, 1992), this finding was not replicated (e.g., Shadel et al., 2009). Moreover, consistent with a previous review (Meeus, 2011), our review showed that many adolescents already reported to have formed strong identity commitments. Furthermore, our review indicates that when adolescents have formed strong commitments, they often stay strongly committed over time. Adolescents' commitments are more stable than their levels of reconsideration (Becht et al., 2017). Similarly, a recent review by Meeus (in press), reported heterogeneity in stability of identity statuses in adolescence. Specifically, less than half of the adolescents in achievement and closure status changed, whereas the majority of adolescents in diffusion and moratorium changed across waves. These findings further support that already in adolescence, firm identity commitments are made that might provide young people with a sense of continuity and structure. These early strong and stable identity commitments indicate that continuity not only emerges after coherence has been constructed.

Furthermore, there is not yet strong empirical evidence for a link between the formation of coherence and continuity (Dunkel et al., 2010). Although some studies have focused on the development of domain-specific commitments (e.g., Becht et al., 2016), the integration of these domain-specific identity commitments, fostering identity coherence, has received less attention. Future studies should investigate the challenges that young people face in integrating domain-specific commitments, and how these affect their sense of continuity and vice versa.

In sum, the few studies on associations between the identity components do not find convincing evidence for linkages between the three components and are all cross-sectional. Future longitudinal studies are needed to test whether the three components strengthen each other over time. Moreover, it could be tested whether associations of distinctiveness with the other components are moderated by age. If distinctiveness really provides a foundation for the development of coherence and continuity, it should more strongly predict increases in coherence and continuity in early adolescence. However, from late adolescence onwards, linkages might become more bidirectional. Related to developmental timing, longitudinal studies are able to inform us about the time interval at which these effects occur and how the timing of the effects might differ for the content of identity versus the structure of identity. For example, identity content may be constructed in daily lives (Pasupathi, Mansour, & Brubaker, 2007) at the so-called micro level (Lichtwarck-Aschoff, van Geert, Bosma, & Kunnen, 2008). In contrast, the development of the structure of identity, such as feelings of coherence and continuity might take longer to develop. However, whether this is the case remains an empirical question. Therefore, future studies are needed to test how identity formation processes develop and affect each other by examining these links at different time scales (e.g., Lichtwarck-Aschoff et al., 2008).

In addition to testing developmental trajectories and linkages between identity distinctiveness, coherence, and continuity across adolescence and young adulthood, it should be mentioned that individuals are embedded in specific historical, cultural, and economic conditions (Baltes, 1987). These different conditions might result in variations between individuals in different contexts and between different generations. For example, findings have shown that the period of searching for commitments is longer in Italy, compared to the Netherlands (Crocetti, Schwartz, Fermani, Klimstra, & Meeus, 2012). This might partly be caused by a relatively

unstable job market in Italy, which might make it harder for young people to commit to a certain occupational domain, for example. In addition, this difference might result from different cultural expectations about the transition to adulthood, which is expected to happen relatively late in Italy compared the Netherlands. Hence, new studies remain vital for examining whether adolescents and young adults in different contexts differ in their developmental trajectories of identity distinctiveness, coherences, and continuity.

Links with Psychosocial Functioning

If distinctiveness, coherence, and continuity are all different components of identity, they should have some overlap but also incremental value in their prediction of psychosocial functioning. Because distinctiveness is thought to form the foundation of identity formation, it might have the strongest link with psychosocial functioning. The fact that this component is represented the most in theories on pathological identity formation further supports this idea. Our review also showed various small to large associations of distinctiveness with psychosocial functioning. Importantly, one study by Pilarska (2014) even showed that feelings of distinctiveness were predictive of positive affect when controlling for feelings of continuity, supporting the idea that distinctiveness may be especially indicative of identity problems.

Our review showed that coherence was less strongly related to psychosocial functioning when using a corrected index. Possibly, the degree of conflict between domains instead of dissimilarity is associated more strongly with psychosocial functioning. Thus, future studies should try to examine between-domain conflict as an alternative operationalization of identity (in)coherence, thereby potentially building on existing knowledge on, for example, work-family conflict (Allen, Herst, Bruck, & Sutton, 2000).

For identity continuity, we found consistent positive associations of experiencing identity continuity with adaptive psychosocial functioning. Clearly, those adolescents and young adults who have developed a stronger sense of continuity have more favorable adjustment outcomes. Interestingly, continuity appeared to uniquely predict psychosocial functioning, after controlling for coherence (Van Hoof & Raaijmakers, 2002).

Future research, including extensive measures of all three components of identity, should further investigate whether these components predict different aspects of psychosocial functioning and whether they have incremental value over each other in these associations. For this, longitudinal studies would be especially valuable, because these can be informative on whether problems in identity formation precede maladaptive functioning or vice versa.

Conclusion

The aim of this systematic review was to create awareness among researchers that identity can be studied focusing on the three different components of distinctiveness, coherence, and continuity. Because these components reside in largely separate literatures, we provided an overview of theories and empirical studies on each component and explained how they are linked to each other. Empirical evidence suggests that these components differ in their development and their links with psychosocial functioning. By bringing together three key identity components and proposing hypotheses on how they are linked in a developmental framework, we hope to stimulate more inclusive research on identity, in which, the now mostly separated fields and approaches will be united.

References

Aalsma, M. C., Lapsley, D. K., & Flannery, D. J. (2006). Personal fables, narcissism, and adolescent adjustment. *Psychology in the Schools, 43*, 481-491. doi:10.1002/pits.20162

Adams-Webber, J. (1985). Self-other contrast and the development of personal constructs. *Canadian Journal of Behavioural Science/Revue Canadienne des Sciences du Comportement, 17*, 303-314. doi:10.1037/h0080042

Allen, T. D., Herst, D. E., Bruck, C. S., & Sutton, M. (2000). Consequences associated with work-to-family conflict: A review and agenda for future research. *Journal of Occupational Health Psychology, 5*, 278-308. doi:10.1037/1076-8998.5.2.278

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.

Antonovsky, H., & Sagy, S. (1986). The development of a sense of coherence and its impact on responses to stress situations. *Journal of Social Psychology, 126,* 213-226.

Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist, 55*, 469-480. doi:10.1037/0003-066x.55.5.469

Baird, B. M., Le, K., & Lucas, R. E. (2006). On the nature of intraindividual personality variability: Reliability, validity, and associations with well-being. *Journal of Personality and Social Psychology, 90*, 512-527. doi:10.1037/0022-3514.90.3.512

Baird, B. M., Lucas, R. E., & Donnellan, M. B. (2017). The role of response styles in the assessment of intraindividual personality variability. *Journal of Research in Personality, 69*, 170-179. doi:10.1016/j.jrp.2016.06.015

Baltes, P. B. (1987). Theoretical propositions of life-span developmental psychology: On the dynamics between growth and decline. *Developmental Psychology, 23*, 611-626. doi:10.1037/0012-1649.23.5.611

Batory, A. (2014). Reorganization of personal identity in the context of motivational dynamics and internal dialogical activity. *Scandinavian Journal of Psychology, 55*, 362-370. doi:10.1111/sjop.12125

Batory, A. M. (2015). What self-aspects appear significant when identity is in danger? Motives crucial under identity threat. *Journal of Constructivist Psychology, 28*, 166-180. doi:10.1080/10720537.2014.923353

Baumeister, R. F., Shapiro, J. P., & Tice, D. M. (1985). Two kinds of identity crisis. *Journal of Personality, 53*, 407-424. doi:10.1111/j.1467-6494.1985.tb00373.x

Becht, A. I., Nelemans, S. A., Branje, S. J., Vollebergh, W. A., Koot, H. M., Denissen, J. J. A., & Meeus, W. H. (2016). The quest for identity in adolescence: Heterogeneity in daily identity formation and psychosocial adjustment across 5 years. *Developmental Psychology, 52*, 2010-2021. doi:10.1037/dev0000245

Becht, A. I., Nelemans, S. A., Branje, S. J. T., Koot, H. M., Vollebergh, W. A. M., & Meeus, W. H. J. (2017). Identity uncertainty and commitment making across adolescence: Five-year within-person associations using daily identity reports. *Developmental Psychology, 53*, 2103-2112. doi:10.1037/dev0000374

Becker, M., Vignoles, V. L., Owe, E., Brown, R., Smith, P. B., Easterbrook, M., . . . Yamakoglu, N. (2012). Culture and the distinctiveness motive: Constructing identity in individualistic and collectivistic contexts. *Journal of Personality and Social Psychology, 102*, 833-855. doi:10.1037/a0026853

Bleidorn, W., & Ködding, C. (2013). The divided self and psychological (mal) adjustment - A meta-analytic review. *Journal of Research in Personality, 47*, 547-552. doi:10.1016/j.jrp.2013.04.009

Block, J. (1961). Ego identity, role variability, and adjustment. *Journal of Consulting Psychology, 25*, 392-397. doi:10.1037/h0042979

Blos, P. (1967). The second individuation process of adolescence. *The Psychoanaltic Study of the Child, 22*, 162-186. doi:10.1080/00797308.1967.11822595

Crocetti, E., Branje, S., Rubini, M., Koot, H. M., & Meeus, W. (2017). Identity processes and parent-child and sibling relationships in adolescence: A five-wave multi-informant longitudinal study. *Child Development, 88*, 210-228. doi:10.1111/cdev.12547

Crocetti, E., Rubini, M., & Meeus, W. (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. doi:10.1016/j.adolescence.2007.09.002

Crocetti, E., Schwartz, S. J., Fermani, A., Klimstra, T., & Meeus, W. (2012). A cross-national study of identity status in Dutch and Italian adolescents. *European Psychologist, 17*, 171-181. doi:10.1027/1016-9040/a000076

Donahue, E. M., Robins, R. W., Roberts, B. W., & John, O. P. (1993). The divided self: Concurrent and longitudinal effects of psychological adjustment and social roles on self-concept differentiation. *Journal of Personality and Social Psychology, 64*, 834-846. doi:10.1037/0022-3514.64.5.834

Dunkel, C. S., Minor, L., & Babineau, M. (2010). The continued assessment of self-continuity and identity. *The Journal of Genetic Psychology, 171*, 251-261. doi:10.1080/00221325.2010.483699

Elkind, D. (1967). Egocentrism in adolescence. *Child Development, 38*, 1025-1034. doi:10.2307/1127100

Erikson, E. H. (1950). *Childhood and society*. New York, NY: Norton.

Erikson, E. H. (1968). *Identity: Youth and crisis*. New York, NY: Norton.

Fukushima, O., & Hosoe, T. (2011). Narcissism, variability in self-concept, and well-being. *Journal of Research in Personality, 45*, 568-575. doi:10.1016/j.jrp.2011.07.002

Galanaki, E. P., & Christopoulos, A. (2011). The imaginary audience and the personal fable in relation to the separation-individuation process during adolescence. *Psychology: The Journal of the Hellenic Psychological Society, 18*, 85-103.

Goossens, L. (2001). Global versus domain-specific statuses in identity research: A comparison of two self-report measures. *Journal of Adolescence, 24*, 681-699. doi:10.1006/jado.2001.0438

Goossens, L., Beyers, W., Emmen, M., & Van Aken, M. A. (2002). The imaginary audience and personal fable: Factor analyses and concurrent validity of the “new look” measures. *Journal of Research on Adolescence, 12*, 193-215. doi:10.1111/1532-7795.00031

Grotevant, H. D., Thorbecke, W., & Meyer, M. L. (1982). An extension of Marcia's Identity Status Interview into the interpersonal domain. *Journal of Youth and Adolescence, 11*, 33-47. doi:10.1007/BF01537815

Habermas, T., & Köber, C. (2015). Autobiographical reasoning in life narratives buffers the effect of biographical disruptions on the sense of self-continuity. *Memory, 23*, 664-674. doi:10.1080/09658211.2014.920885

Harter, S. (2012). *The construction of the self: Developmental and sociocultural foundations* (2nd ed.). New York, NY: Guilford.

Harter, S., & Monsour, A. (1992). Development analysis of conflict caused by opposing attributes in the adolescent self-portrait. *Developmental Psychology, 28*, 251-260. doi:10.1037/0012-1649.28.2.251

Hirschi, A. (2012). Vocational identity trajectories: Differences in personality and development of well-being. *European Journal of Personality, 26*, 2-12. doi:10.1002/per.812

Ingoglia, S., Lo Coco, A., & Albiero, P. (2016). Development of a Brief Form of the Interpersonal Reactivity Index (B–IRI). *Journal of Personality Assessment, 98*, 461-471. doi:10.1080/00223891.2016.1149858

Ingoglia, S., Lo Coco, A., Liga, F., & Grazia Lo Cricchio, M. (2011). Emotional separation and detachment as two distinct dimensions of parent—adolescent relationships. *International Journal of Behavioral Development, 35*, 271-281. doi:10.1177/0165025410385878

Kelly, G. A. (1955). *The psychology of personal constructs*. New York, NY: Norton.

Kernberg, O. F., & Caligor, E. (2005). In M. F. Lenzenweger & J. F. Clarkin (Eds.), *Major theories of personality disorder* (2nd ed., pp. 114-156). New York, NY: The Guilford Press.

Lapsley, D. K., FitzGerald, D. P., Rice, K. G., & Jackson, S. (1989). Separation-individuation and the "new look" at the imaginary audience and personal fable a test of an integrative model. *Journal of Adolescent Research, 4*, 483-505. doi:10.1177/074355488944006

Lichtwarck-Aschoff, A., van Geert, P., Bosma, H., & Kunnen, S. (2008). Time and identity: A framework for research and theory formation. *Developmental Review, 28*, 370-400. doi:10.1016/j.dr.2008.04.001

Lopez, F. G. (2001). Adult attachment orientations, self-other boundary regulation, and splitting tendencies in a college sample. *Journal of Counseling Psychology, 48*, 440-446. doi:10.1037/0022-0167.48.4.440

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. doi:10.1037/0012-1649.42.2.366

Luyckx, K., Klimstra, T. A., Schwartz, S. J., & Duriez, B. (2013). Personal identity in college and the work context: Developmental trajectories and psychosocial functioning. *European Journal of Personality, 27*, 222-237. doi:10.1111/sode.12027

Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology, 3*, 551-558. doi:10.1037/h0023281

McLean, K. C., Syed, M., & Shucard, H. (2016). Bringing identity content to the fore: Links to identity development processes. *Emerging Adulthood, 4*, 356-364. doi:10.1177/2167696815626820

Meeus, W. (2011). The study of adolescent identity formation 2000–2010: A review of longitudinal research. *Journal of Research on Adolescence, 21*, 75-94. doi:10.1111/j.1532-7795.2010.00716.x

Meeus, W. (in press). The identity status continuum revisited: A comparison of longitudinal findings with Marcia's model and dual cycle models. *European Psychologist*.

Meeus, W., Van de Schoot, R., Keijsers, L., & Branje, S. (2012). Identity statuses as developmental trajectories: A five-wave longitudinal study in early-to-middle and

middle-to-late adolescents. *Journal of Youth Adolescence, 41*, 1008-1021. doi:10.1007/s10964-011-9730-y

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. doi:10.1111/j.1467-8624.2010.01492.x

Mercer, N., Crocetti, E., Branje, S., Van Lier, P., & Meeus, W. (2017). Linking delinquency and personal identity formation across adolescence: Examining between-and within-person associations. *Developmental Psychology, 53*, 2182-2194. doi:10.1037/dev0000351

Neff, K. D., & McGehee, P. (2010). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity, 9*, 225-240. doi:10.1080/15298860902979307

Olver, R. R., Aries, E., & Batgos, J. (1989). Self-other differentiation and the mother-child relationship: The effects of sex and birth order. *The Journal of Genetic Psychology, 150*, 311-322. doi:10.1080/00221325.1989.9914600

Pasupathi, M. (2014). Identity development: Dialogue between normative and pathological developmental approaches. *Journal of Personality Disorders, 28*, 113-120. doi:10.1521/pedi.2014.28.1.113

Pasupathi, M., Mansour, E., & Brubaker, J. R. (2007). Developing a life story: Constructing relations between self and experience in autobiographical narratives. *Human Development, 50*, 85-110. doi:10.1159/000100939

Pilarska, A. (2014). Self-construal as a mediator between identity structure and subjective well-being. *Current Psychology, 33*, 130-154. doi:10.1007/s12144-013-9202-5

Pilarska, A., & Suchańska, A. (2015a). The identity processes and the sense of identity: Interrelations and significance to the capacity for closeness. *Studia Psychologiczne, 53,* 87-100. doi:10.2478/V1067-010-0142-3

Pilarska, A., & Suchańska, A. (2015b). Self-complexity and self-concept differentiation–What have we been measuring for the past 30 years? *Current Psychology, 34*, 723-743. doi:10.1007/s12144-014-9285-7

Rochat, P. (2003). Five levels of self-awareness as they unfold early in life. *Consciousness and Cognition, 12*, 717-731. doi:10.1016/S1053-8100(03)00081-3

Shadel, W. G., Tharp-Taylor, S., & Fryer, C. S. (2009). How does exposure to cigarette advertising contribute to smoking in adolescents? The role of the developing self-concept and identification with advertising models. *Addictive Behaviors, 34*, 932-937. doi:10.1016/j.addbeh.2009.05.014

Shirai, T., Nakamura, T., & Katsuma, K. (2016). Identity development in relation to time beliefs in emerging adulthood: A long-term longitudinal study. *Identity: An International Journal of Theory and Research, 16*, 45-58. doi:10.1080/15283488.2015.1121817

Şimşek, Ö. F., & Yalınçetin, B. (2010). I feel unique, therefore I am: The development and preliminary validation of the Personal Sense of Uniqueness (PSU) scale. *Personality and Individual Differences, 49*, 576-581. doi:10.1016/j.paid.2010.05.006

Snyder, C. R., & Fromkin, H. L. (1980). *Uniqueness: The human pursuit of difference*. New York, NY: Plenum Press.

Syed, M., & McLean, K. C. (2016). Understanding identity integration: Theoretical, methodological, and applied issues. *Journal of Adolescence, 47*, 109-118. doi:10.1016/j.adolescence.2015.09.005

Van Hoof, A. (1999). The identity status field re-reviewed: An update of unresolved and neglected issues with a view on some alternative approaches. *Developmental Review, 19*, 497-556. doi:10.1006/drev.1999.0484

Van Hoof, A., & Raaijmakers, Q. A. W. (2002). The spatial integration of adolescent identity: Its relation to age, education, and subjective well-being. *Scandinavian Journal of Psychology, 43*, 201-212. doi:10.1111/1467-9450.00288

Van Hoof, A., & Raaijmakers, Q. A. W. (2003). The search for the structure of identity formation. *Identity: An International Journal of Theory and Research, 3*, 271-289. doi:10.1207/S1532706XID0303_06

Vignoles, V. L. (2011). Identity motives. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 403-432). New York, NY: Springer.

Vignoles, V. L., Regalia, C., Manzi, C., Golledge, J., & Scabini, E. (2006). Beyond self-esteem: Influence of multiple motives on identity construction. *Journal of Personality and Social Psychology, 90*, 308-333. doi:10.1037/0022-3514.90.2.308

Waterman, A. S. (1982). Identity development from adolescence to adulthood: An extension of theory and a review of research. *Developmental Psychology, 18*, 341-358. doi:10.1037/0012-1649.18.3.341

Waterman, A. S. (1988). Identity status theory and Erikson's theory: Communalities and differences. *Developmental Review, 8*, 185-208. doi:10.1016/0273-2297(88)90003-2