



Identity statuses in young adult employees: Prospective relations with work engagement and burnout[☆]

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ABSTRACT

The importance of identity statuses for individuals' well-being and psychosocial functioning has been demonstrated abundantly in high school and college samples. The present longitudinal study complemented this research line by (a) focusing on identity clusters or statuses in a sample of 300 working young adults (21–40 years of age), and (b) investigating the concurrent and prospective implications of these identity statuses for work engagement and burnout. Based on a recently developed dimensional model of personal identity formation, five distinct statuses were obtained, largely replicating previous research on identity clusters. These five statuses were meaningfully differentiated on the basis of their associations with the outcome measures, with the identity achievement status showing the most optimal profile (low burnout, high engagement) and the diffused diffusion status the least adjusted profile across time. Implications and suggestions for future research are discussed.

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Abundant research focused on employees' experiences of burnout and its positive antipode, work engagement, and on multiple antecedents of these outcomes (Maslach, Schaufeli, & Leiter, 2001; Schaufeli & Bakker, 2004). These antecedents traditionally have been organized into two distinct levels, that is, situational (e.g., task, team, and organizational) and individual (e.g., demographic, attitudinal, personality, and motivational) characteristics (Maslach et al., 2001). Previous research predominantly focused on situational antecedents (such as job demands and resources; Bakker & Demerouti, 2007), somewhat at the expense of individual characteristics (Swider & Zimmerman, 2010). However, given the substantial impact of burnout and engagement on job satisfaction and performance, absenteeism, job turnover, and physical health (Maslach et al., 2001; Schaufeli & Bakker, 2004), individual characteristics of employees need to be studied to determine which individuals are susceptible for developing burnout or, vice versa, for experiencing work engagement. Swider and Zimmerman 2010 performed a timely meta-analysis on the relationship between the Big Five of personality and burnout, testifying to the importance of individual differences for experiencing burnout.

The present study takes on a complementary approach to the link between individual characteristics and job outcomes by focusing on personal identity formation, a normative developmental task of late adolescence and young adulthood (Erikson, 1968). Developing a coherent and synthesized identity is a key developmental task on the road to adulthood and has substantial implications for individuals' psychosocial functioning across a broad array of outcomes (Kroger & Marcia, in press). For Erikson, identity 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. Nowadays, social-structural changes in many Western nations have resulted in the delaying of identity formation until the twenties (Arnett, 2000). Today's young adults can select from a wider assortment of identity choices and can take a more active

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role in their own future planning (Côté, 1996; Skorikov & Vondracek, in press). However, confusion can be induced in individuals who find the many possibilities intimidating (Schwartz, Côté, & Arnett, 2005).

Individual Differences in Identity Formation: Identity Statuses

The identity status paradigm (Marcia, 1966) was the first neo-Eriksonian identity model to generate a significant research literature. 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), Marcia identified four identity types or statuses. Each identity status represents a combination of levels (present vs. absent) of exploration and commitment. Achievement and foreclosure are characterized by the presence of commitments but, whereas achievement is characterized by commitments following a period of exploration, foreclosure is characterized by commitments enacted without much prior exploration. Moratorium and diffusion are characterized by the relative absence of commitment but whereas individuals in moratorium are currently exploring potential choices, diffused individuals have engaged in little systematic exploration.

Recently, there has been an upsurge in the study of empirically derived identity statuses through the use of cluster analysis (e.g., Crocetti, Rubini, Luyckx, & Meeus, 2008; Luyckx, Schwartz, Berzonsky, et al., 2008; Luyckx, Vansteenkiste, Goossens, & Duriez, 2009; Schwartz et al., 2010). In contrast to previous work in which the four identity statuses were defined by dividing the two dimensions of exploration and commitment into “high” versus “low” levels, these recent attempts derived identity statuses by first unpacking exploration and commitment into a larger set of specific processes. Importantly, and irrespective of the specific identity questionnaires used to derive the statuses, Marcia’s original four statuses emerged, along with some new statuses.

For instance, in studies by Luyckx et al. (2005, 2008, 2009), a carefree diffusion status empirically emerged (as theoretically described, for instance, by Archer & Waterman, 1990). Such a cluster was characterized by low scores on all the identity dimensions, accompanied by a relative lack of personal distress as indexed, for instance, by depressive symptoms. In addition, Luyckx et al. consistently identified a diffused diffusion status, consisting of individuals characterized by a lack of commitments coupled with a haphazard, disorganized, and even ruminative approach to exploring identity issues. These individuals resembled somewhat the moratorium-diffusion individuals described by Josselson (1987), experiencing distress regarding their lack of identity-related commitments or of a proactive identity search and, consequently, worrying about what they actually want. All of these previous studies, however, sampled high school or college students. It remains to be investigated whether the same identity statuses would emerge when sampling young adult employees.

The present study made use of the recently developed identity model by Luyckx et al. (2006, 2008) to derive identity statuses in a sample of young adult employees. Basically, this model made an empirical synthesis of existing theories in the field (Bosma & Kunnen, 2001; Grotevant, 1987; Kerpelman, Pittman, & Lamke, 1997; Marcia, 1966; Meeus, 1996), and five interrelated identity dimensions were distinguished. First, these dimensions captured the extent to which individuals arrive at forming identity commitments (*commitment making*), partially through a process of exploring various identity alternatives (*exploration in breadth*). Second, these dimensions assessed the degree to which current identity commitments are evaluated through thinking about them and talking with others about them (*exploration in depth*), possibly resulting in an experienced sense of security and satisfaction with respect to these commitments (*identification with commitment*). However, both these processes of forming and evaluating commitments can be disturbed when individuals become “stuck” in the exploration process, continuously questioning and obsessing over their choices (*ruminative exploration*). These dimensions were measured with reference to the domain of future plans and goals because late adolescence and young adulthood are a time of planning for the future. By setting future-oriented goals, exploring related options, and making identity commitments, young people can find their own niche in their social world (Nurmi, 1991).

Work Engagement and Burnout

Empirically derived identity statuses have been validated using a host of correlates, such as self-esteem, anxiety, depression, risk behavior, and the Eriksonian constructs of identity synthesis and confusion (Luyckx, Schwartz, Berzonsky, et al., 2008; Schwartz et al., 2010). The importance of such identity statuses for the work context remains to be investigated. We hypothesize that how people make and evaluate identity-related choices with respect to their lives and future (or fail to do so in a pro-active manner) might be important for how they experience their jobs and function at the workplace. If individuals have thought about different life directions or future possibilities and have autonomously chosen a life pathway (i.e., achieved individuals), they likely invested stronger in their career choice and, hence, are likely to experience more work engagement and less job burnout. Conversely, if individuals have no idea where their life is heading and are out of touch with their capacities and desires (i.e., diffused individuals), they should be less likely to find a job that fits with these capacities and desires and, hence, are likely to experience less engagement and more burnout (Schwartz et al., 2005; Skorikov & Vondracek, in press). Empirical work underscores these propositions, as identity statuses have been linked to a number of variables that are important towards job outcomes, such as the Big Five (Clancy & Dollinger, 1993), need satisfaction (Luyckx, Vansteenkiste, Goossens, & Duriez, 2009), and self-esteem (Kroger & Marcia, in press).

Job-related outcomes are commonly indexed by job burnout and its positive antipode work engagement (Maslach et al., 2001; Schaufeli & Bakker, 2004). Job burnout is conceptualized as a psychological syndrome, consisting of three components: emotional exhaustion, cynicism or depersonalization, and reduced professional efficacy or accomplishment (Maslach & Jackson, 1981). Emotional exhaustion refers to feelings of being overextended and depleted of one’s resources. Cynicism refers to a negative or

excessively detached response to the job. Reduced professional efficacy refers to reduced incompetence, achievement, and productivity at work. The first two components are considered to constitute the core of burnout (e.g., Green, Walkey, & Taylor, 1991) and, consequently, were assessed in the present study. Work engagement is defined as a persistent and positive affective-emotional state of fulfilment characterized by vigor, dedication, and absorption (Schaufeli & Bakker, 2004). Vigor refers to high levels of energy and resilience, persistence, and the willingness to invest in one's work. Dedication is characterized by a sense of enthusiasm, inspiration, challenge, and pride in one's work. Accordingly, dedication and vigor are viewed as direct opposites of the two core aspects of burnout (Schaufeli & Salanova, 2007). Finally, absorption refers to a state of total immersion and concentration in one's job. All three components of work engagement were assessed in the present study.

Study Objectives

The present study explored three research objectives in a sample of 21–40 year old employees. Partially based on theorizing and previous identity research, some hypotheses (e.g., on the link between identity statuses and job outcomes) can be forwarded.

Objective 1: Empirically derived identity statuses. Previous research sampling high school and college students consistently replicated six identity statuses through cluster analysis (Luyckx et al., 2008, 2009). In general, achievement was characterized by high scores on all dimensions except for a low score on ruminative exploration. Foreclosure had high scores on the commitment dimensions (although not as high as for achievement) and low scores on the exploration dimensions. Moratorium was characterized by low to moderate scores on the commitment dimensions and high scores on the exploration dimensions. Both diffusion statuses had low to moderate scores on all dimensions, except for a high score on ruminative exploration in the case of diffused diffusion. Finally, an undifferentiated status was identified, characterized by moderate scores on all dimensions.

Little is known about the existence of such identity statuses in working young adults. Further, previous studies on identity formation in working samples produced contradictory results. Whereas some studies found more individuals being identity committed among those who were at work compared to those attending college, other studies found college students to be more advanced in identity development than those at work (Fadjukoff, Kokko, & Pulkkinen, 2007). Luyckx, Schwartz, Goossens, and Pollock (2008) found that employed emerging adults scored higher on commitment making and lower on all three exploration dimensions than college students did. Apparently, the university context seems to provide individuals with some sort of psychosocial moratorium enabling them to postpone permanent adult decisions and to explore different identity alternatives (Arnett, 2000; Erikson, 1968). As such, the first objective was to investigate whether the same identity statuses found among college students could be replicated in young adult employees.

Objective 2: Relating the statuses to job characteristics. Next, we investigated how individuals belonging to different statuses perceived their jobs, mainly in terms of various job demands and resources as identified, for instance, in the Job Demands-Resources model (JD-R model; Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). According to JD-R scholars, the variety of job characteristics affecting employees' well-being can be meaningfully divided into two higher order categories, that is, job demands and job resources. Job demands (e.g., emotional workload or workfloor conflicts) tax employees' personal capacities and are associated with certain psychological costs such as a lowered well-being (Bakker, Demerouti, de Boer & Schaufeli, 2003; de Jonge & Dormann, 2006). Job resources (e.g., social support from colleagues and task autonomy) are functional in achieving work goals and stimulate development and learning (Schaufeli & Bakker, 2004). As such, we explored, for instance, whether individuals in the achievement status experienced their jobs as more resourceful than individuals in the diffused diffusion status did.

Further, given that previous research abundantly demonstrated that various job characteristics were differentially related to job outcomes (Bakker & Demerouti, 2007), we controlled for job characteristics that significantly differentiated among the statuses when relating identity statuses to job outcomes. In doing so, we were able to capture the relationships of the identity statuses to the job outcomes taking into account possible mean differences in job characteristics among the statuses.

Objective 3: Relating the statuses to job-related outcomes. Finally, we related the obtained statuses to job outcomes and depressive symptoms. The latter scale was included to externally validate the statuses by enabling an explicit comparison to previous cluster-analytic studies. Previous research consistently found that achieved individuals fared better on a broad array of psychosocial variables than individuals in the diffused diffusion status. Translated to the present study, we expected that the achievement status would be characterized by the highest scores on work engagement and the lowest scores on burnout and depressive symptoms, whereas the inverse pattern of associations would be observed for the diffused diffusion status.

Further, given that making firm commitments is linked to well-being and positive functioning, foreclosed individuals were generally found to score rather similarly as achieved individuals on measures such as depressive symptoms and self-esteem. However, partially due to their rigid functioning, they scored significantly lower on life purpose and meaning in life, suggesting that individuals who pro-actively explore in the process of making commitments may be more likely to live up to their inner potentials and ascribe meaning to their lives (Schwartz et al., 2010; Skorikov & Vondracek, in press; Waterman, 2007). Consequently, we hypothesized that differences between achievement and foreclosure could emerge. For instance, foreclosed individuals could experience less job absorption or more job exhaustion given that the life path they are embarking on might be experienced as less autonomous, self-defining, and not in accordance with their actual potentials and talents (cf. Skorikov, 2008; Waterman, 2007).

The remaining three statuses (i.e., moratorium, carefree diffusion, and undifferentiated) were generally situated in-between achievement and foreclosure on the one hand and diffused diffusion on the other, depending on the outcome variable under study. For instance, whereas the moratorium status was found to score as high as the achievement status on openness to experience and

internal locus of control (Luyckx et al., 2005; Schwartz et al., 2010), the former status scored as high as the diffused diffusion status on depressive symptoms and anxiety (Luyckx, Schwartz, Berzonsky, et al., 2008; Schwartz et al., 2010). So, although the exploratory approach of moratorium individuals signals adaptive underlying personality traits, their lack of strong commitments and in-crisis position makes these individuals vulnerable for maladjustment. Especially due to the lack of strong and stable commitments and future plans, we hypothesized that individuals in moratorium would score lower on work engagement and higher on burnout as compared to achieved individuals. However, individuals in the moratorium status would score significantly better on the job outcome variables as compared to individuals in the diffused diffusion status, partially because of their higher scores on autonomy and competence in their quest for an adult identity, as evidenced in their ability to initiate and invest in a proactive identity search (Luyckx et al., 2009).

To assess both the concurrent and prospective implications of the identity statuses towards job outcomes, the latter variables were assessed three times over 1 year. In doing so, we were able to investigate the extent to which the identity statuses would be differentiated (a) by the *level* of the outcome variables at the three measurement points, but also (b) by possible *changes* in these outcome variables across time. For instance, individuals in the achievement status might not only be characterized by the highest levels of job vigor but also by increases in this variable across time.

Method

Participants and Procedure

A total of 318 Dutch-speaking Belgian individuals (74% women; 97% Caucasian) participated in an online survey. Mean age was 29.10 year ($SD = 4.86$; range 21–40 years). For the present analyses, 18 participants were excluded because they were unemployed. Of the remaining 300 participants, 53% reported being married or were living together with their partner (with an additional 11% having a romantic partner without living together), and 30% reported having children. A total of 94% had received some degree of post-secondary education. A total of 66% were working in the social sector (such as education, healthcare, and welfare); 21.1% were working in the governmental or public service sector. A total of 82% of the sample were working full-time. Currently, 44% had a temporary contract, whereas the remaining 56% had a permanent contract. Mean organizational tenure was 3.87 years ($SD = 3.61$; range 0 to 17 years). Finally, 80% of the sample reported net incomes between 1000 and 2000 euros (approximately \$1,413 to \$2,826) per month.

At 6 months (T2) and 12 months (T3) after the initial measurement (T1), follow-up assessments were completed. At T2, 235 out of 300 (78.3%) participated again, whereas, at T3, 220 (73.3%) participated again. With respect to gender, mean age, having a partner or not, type of contract (i.e., temporary vs. permanent), mean organizational tenure, monthly income, work sector, and job demands and resources, there were no significant differences between those who dropped out and those who continued to participate. With respect to educational level ($F(1, 298) = 6.19, p < .05, \eta^2 = .02$), drop-outs had a slightly lower educational level than those who continued to participate. Further, a series of univariate analyses of variance indicated that those who dropped out during the study did not differ from those who continued to participate on any of the identity or outcome variables at T1 (with F -values for the different variables ranging from .01 to 1.76; all $ps > .05$). Further, participants with and without complete data were compared on all the identity and outcome variables using Little's (1988) Missing Completely At Random (MCAR) test. A non-significant test statistic ($\chi^2(118) = 8.49, ns$) suggested that missing values could be reliably estimated. Consequently, to minimize the bias associated with attrition (Collins, Schafer, & Kam, 2001; Schafer & Graham, 2002), we used the expectation maximization algorithm to estimate missing data (only 9.8% of the data were estimated), enabling us to perform all analyses on the full sample.

Measures

Job characteristics. We selected three job demands (i.e., pace of work, emotional workload, and role conflict) and three job resources (i.e., task autonomy, job variety, and social support from colleagues) which are commonly included in JD-R studies. All job characteristics were measured on a 4-point Likert scale, ranging from 0 (*never*) to 3 (*always*). All items were taken from the Short Inventory to Monitor Psychosocial Hazards (SIMPH; Notelaers, De Witte, van Veldhoven, & Vermunt, 2007). Sample items read: "I have to hurry at work" (pace of work; three items), "My job puts me in emotional situations" (emotional workload; three items), "I receive contradictory instructions" (role conflict; four items), "I can decide on the order of priorities for my work activities" (task autonomy; three items), "My work is varied" (job variety; three items), and "I can count on my colleagues when I have difficulties in my job" (social support from colleagues; three items). Cronbach's alphas at T1 were .76, .89, .70, .74, .77, and .84, respectively.

Identity formation. The Dimensions of Identity Development Scale (DIDS; Luyckx, Schwartz, et al., 2008) was used. The identity dimensions were measured by five items each on 5-point Likert-type scales ranging from 1 (*completely disagree*) to 5 (*completely agree*). Sample items read: "I have decided on the direction I want to follow in my life" (Commitment making), "I sense that the direction I want to take in my life will really suit me" (Identification with commitment), "I regularly think over a number of different plans for the future" (Exploration in breadth), "I regularly talk with other people about the plans for the future I have made for myself" (Exploration in depth), and "It is hard for me to stop thinking about the direction I want to follow in my life" (Ruminative exploration). Cronbach's alphas at T1 were .88, .81, .84, .82, and .89, respectively.

Because the DIDS has never been used in 21 to 40 year old employees, confirmatory factor analysis (CFA) was used to check its factor structure. In all estimated models, we used standard model fit indices (Kline, 2006). The chi-square index, which tests the

null hypothesis of perfect fit to the data, should be as small as possible; the Root Mean Square Error of Approximation (RMSEA) should equal or be less than .08; and the Comparative Fit Index (CFI) should exceed .90 and preferably .95. Because preliminary analyses indicated non-normality in the data, the Satorra and Bentler (1994) scaled chi-square statistic ($SBS-\chi^2$) was used. CFA indicated that the model comprising the five identity dimensions had an adequate fit to the data ($SBS-\chi^2(265) = 825.56$, $RMSEA = .08$, $CFI = .93$) and, in line with Luyckx, Schwartz, Berzonsky, et al. (2008), provided a better fit to the data than alternative four-, three-, two- (i.e., global commitment and exploration), or one-factor models.

Work engagement and job burnout. Job burnout was assessed with the two core subscales (i.e., exhaustion and cynicism; Green et al., 1991; Maslach et al., 2001) from the Dutch version (Schaufeli & Van Dierendonck, 2000) of the Maslach Burnout Inventory-General Survey (MBI-GS; Schaufeli, Leiter, Maslach, & Jackson, 1996). Sample items read: “I feel used up at the end of a work day” (Exhaustion; five items) and “I doubt the significance of my work” (Cynicism; four items). All items were scored on a 7-point Likert-type rating scale ranging from 0 (*Never*) to 6 (*Always*). Cronbach's alphas were .84 and .85 at T1, .85 and .83 at T2, and .89 and .83 at T3, respectively.

Work engagement was assessed with the shortened version of the Utrecht Work Engagement Scale (UWES; Schaufeli & Bakker, 2004; Schaufeli, Salanova, González-Romá, & Bakker, 2002). The three subscales, Vigor, Dedication, and Absorption, are assessed with three items each. Sample items read: “When I get up in the morning, I feel like going to work” (Vigor), “I am enthusiastic about my job” (Dedication), and “When I am working, I forget everything else around me” (Absorption). Cronbach's alphas were .83, .87, and .76 at T1, .82, .87, and .74 at T2, and .85, .90, and .77 at T3, respectively.

CFA indicated that the five-factor model fit the data adequately (T1: $df = 125$, $SBS-\chi^2 = 327.78$, $RMSEA = .07$, $CFI = .94$; T2: $df = 125$, $SBS-\chi^2 = 307.93$, $RMSEA = .08$, $CFI = .96$; and T3: $df = 125$, $SBS-\chi^2 = 281.44$, $RMSEA = .07$, $CFI = .96$). Further, the five-factor model provided a significantly better fit to the data than the alternative two- (including latent Burnout and Engagement factors; T1: $df = 134$, $SBS-\chi^2 = 914.93$, $RMSEA = .14$, $CFI = .87$; T2: $df = 134$, $SBS-\chi^2 = 792.73$, $RMSEA = .14$, $CFI = .90$; and T3: $df = 134$, $SBS-\chi^2 = 697.40$, $RMSEA = .14$, $CFI = .90$) and one-factor models (T1: $df = 135$, $SBS-\chi^2 = 1210.09$, $RMSEA = .16$, $CFI = .84$; T2: $df = 135$, $SBS-\chi^2 = 1000.51$, $RMSEA = .16$, $CFI = .87$; and T3: $df = 135$, $SBS-\chi^2 = 1014.08$, $RMSEA = .17$, $CFI = .88$).

Depressive symptoms. Depressive symptoms were measured using the 12-item Center for Epidemiologic Studies Depression Scale (CESD; Radloff, 1977; Roberts & Sobhan, 1992). The CESD was specifically designed for use with non-clinical samples and is one of the most frequently used measures of depressive symptoms in survey research. Participants were asked to indicate how often they experienced various symptoms of depression during the week prior to assessment. Items were scored on a 4-point Likert-type rating scale, ranging from 0 (*Seldom*) to 3 (*Most of the time or always*). A sample item reads: “During the last week, I felt depressed”. Cronbach's alpha was .83 at T1, .86 at T2, and .87 at T3.

Results

Preliminary Mean-Level and Correlational Analyses

With respect to work outcomes and depressive symptoms, repeated measures analyses of variance were used to investigate possible mean-level changes across time, as displayed in Table 1. Limited mean-level changes were observed for exhaustion, cynicism, and vigor, with the former two variables increasing across time and the latter variable decreasing across time. With respect to rank-order stability, stability coefficients for T1–2 ranged between .47 and .65 and for T2–3 between .48 and .64 (all $ps < .001$). Table 2 presents the correlations among all study variables at T1. Commitment making and identification with commitment were positively related to vigor, dedication, and absorption, and negatively to exhaustion, cynicism, and depressive symptoms. Ruminative exploration showed the opposite pattern of associations. Exploration in breadth and exploration in depth were largely unrelated to the outcome measures.

Cluster Analysis

Cluster analysis on the five identity dimensions at T1 was conducted using a two-step procedure (Gore, 2000). Prior to conducting the analysis, we removed 10 univariate (i.e., values more than 3 SDs below or above the mean) and multivariate outliers (i.e., individuals with high Mahalanobis distance values). Three- to six-cluster solutions were evaluated in terms of substantive interpretability, parsimony, and explanatory power (i.e., the cluster solution had to explain approximately 50% of the

Table 1
Descriptive Statistics and Mean-Level Changes for the Outcome Variables.

Variable	Time 1	Time 2	Time 3	F-value	η^2
1. Exhaustion	2.05 (0.77)	2.16 (0.72)	2.17 (0.74)	4.01*	.03
2. Cynicism	2.11 (0.97)	2.22 (0.88)	2.25 (0.84)	3.43*	.02
3. Vigor	3.51 (0.77)	3.41 (0.68)	3.42 (0.70)	3.20*	.02
4. Dedication	3.83 (0.87)	3.75 (0.80)	3.76 (0.75)	2.07	.01
5. Absorption	3.46 (0.79)	3.43 (0.72)	3.46 (0.68)	0.50	<.01
6. Depressive symptoms	0.70 (0.47)	0.73 (0.45)	0.71 (0.44)	0.56	<.01

Note. Standard deviations are in parentheses.

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

Table 2
Correlations Among Identity and Job Outcome Variables at Time 1 ($N = 300$).

	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	
1. Commitment making	.65***	.18**	.16**	-.53***	-.17**	-.29***	.30***	.35***	.25***	-.32***	
2. Identification with commitment		.22***	.33***	-.38***	-.26***	-.14*	.34***	.25***	.23***	-.35***	
3. Exploration in breadth			.66***	.37***	.12*	.18**	.07	.02	.08	.13*	
4. Exploration in depth				.26***	.05	.13*	.12*	.06	.09	.02	
5. Ruminative exploration					.35***	.33***	-.21***	-.28***	-.13*	.46***	
6. Exhaustion						.46***	-.49***	-.36***	-.33***	.45***	
7. Cynicism							-.58***	-.62***	-.44***	.37***	
8. Vigor								.71***	.67***	-.36***	
9. Dedication									.71***	-.32***	
10. Absorption										-.24***	
11. Depressive symptoms											—

* $p < .05$.

** $p < .01$.

*** $p < .001$.

variance in each of the constituting dimensions). In the first step, a hierarchical cluster analysis was carried out using Ward's method based on squared Euclidian distances. In the second step, these initial cluster centers were used as non-random starting points in an iterative k -means clustering procedure.

A total of five clusters were retained. This cluster solution explained between 54% and 61% of the variance in the identity dimensions. In the three and four-cluster solutions, the percentage explained variance was less than adequate for several identity dimensions, whereas in the six-cluster solution two highly similar clusters emerged. Further, to assess the extent to which the five-cluster solution would be replicable and internally consistent (Aldenderfer & Blashfield, 1984), tests of omission—one leaves out one cluster, reclusters the remaining cases into $k - 1$ clusters, and checks the overlap with the original solution—were performed to investigate if the solution obtained proved to be a stable one as indicated by means of Cohen's kappa (κ) (Breckenridge, 2000). As there were five clusters, this procedure was repeated five times and the resulting kappa's were averaged. The averaged kappa for the present study was .94, attesting to the consistency of the five-cluster solution.

Fig. 1 presents the final five-cluster solution. The Y-axis represents z-scores. Analogous to Cohen's (1988) d , 0.2 SD is a small effect, 0.5 SD is a medium or moderate effect, and 0.8 SD is a large effect. As expected, the achievement cluster scored high on both commitment dimensions, exploration in breadth, and exploration in depth, and low on ruminative exploration ($N = 37$; 13%). The foreclosure cluster scored moderately high to high on both commitment dimensions and moderately low to low on all three exploration dimensions ($N = 68$; 23%). The moratorium cluster scored intermediate on both commitment dimensions, and moderately high to high on the three exploration dimensions ($N = 81$; 28%). The carefree diffusion cluster scored moderately low to low on all five identity dimensions ($N = 52$; 18%). Finally, the diffused diffusion cluster scored low on both commitment dimensions, intermediate on exploration in depth, moderately high on exploration in breadth, and high on ruminative exploration ($N = 52$; 18%).

External Correlates

Demographic and work context variables. These five clusters did not differ with respect to mean age and educational level ($F(4, 285) = 1.20, p > .05, \eta^2 = .02$; and $F(4, 582) = 0.42, p > .05, \eta^2 = .01$, respectively). These clusters did not differ on gender distribution ($\chi^2(4) = 4.19; p > .05$), on whether individuals assigned to these clusters were in a relationship or not ($\chi^2(4) = 2.79; p > .05$), and on whether they had children or not ($\chi^2(4) = 8.56; p > .05$). With respect to the work context variables, the five

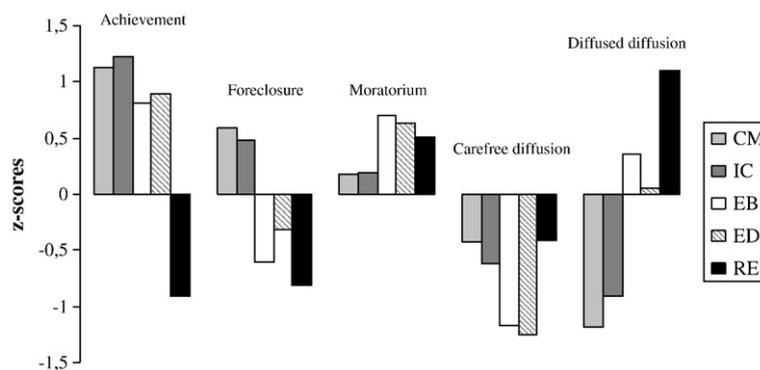


Fig. 1. Final cluster-solution for the identity variables. Z-scores for commitment making (CM), identification with commitment (IC), exploration in breadth (EB), exploration in depth (ED), and ruminative exploration (RE).

clusters did not differ significantly with respect to type of contract (i.e., temporary vs. permanent) ($\chi^2(4) = 7.41; p > .05$), the sector in which they were working ($\chi^2(28) = 33.60; p > .05$), and monthly income ($F(4, 285) = 1.77, p > .05, \eta^2 = .02$). With respect to mean organizational tenure, a significant, albeit small, difference was obtained ($F(4, 279) = 3.46, p < .01, \eta^2 = .04$), with individuals belonging to the foreclosure cluster ($M = 4.87; SD = 4.18$) having a higher mean organizational tenure than those belonging to the diffused diffusion cluster ($M = 2.53; SD = 2.69$). The other three clusters did not differ significantly from these two clusters. Finally, with respect to the job characteristics at T1, a multivariate analysis of variance was conducted with cluster membership as independent or fixed variable and all job characteristics as dependent variables. Based upon Wilks' Lambda, a statistically significant multivariate effect was found ($F(24, 978) = 1.96, p < .01, \eta^2 = .04$). Follow-up univariate analyses indicated that only job variety was significantly different among the clusters ($F(4, 285) = 4.09, p < .01, \eta^2 = .05$), with the achievement cluster scoring higher than the diffused diffusion, moratorium, and foreclosure clusters (with the latter three clusters not differing significantly from one another).

Outcome variables. Three sets of multivariate analyses of variance, one for the outcome variables (i.e., exhaustion, cynicism, vigor, dedication, absorption, and depressive symptoms) at each measurement occasion, were conducted with cluster membership as independent or fixed variable. At all three timepoints, based upon Wilks' Lambda, statistically significant multivariate cluster differences were found (T1: $F(24, 978) = 4.23, p < .001, \eta^2 = .08$; T2: $F(24, 978) = 2.29, p < .001, \eta^2 = .05$; and T3: $F(24, 978) = 2.01, p < .001, \eta^2 = .04$). Follow-up univariate F -values, η^2 , and pairwise comparisons (using Tukey's Honestly Significant Difference test) are shown in Table 3. Significant differences among the clusters were found for all variables at all three timepoints.

In general, with respect to job exhaustion and cynicism, foreclosure and especially achievement showed the most optimal profile at T1–3, whereas diffused diffusion (as opposed to carefree diffusion) consistently was characterized by the highest scores. With respect to job vigor, dedication, and absorption, achievement was characterized by the highest scores and diffused diffusion by the lowest scores at T1–3. With respect to job absorption, foreclosure scored as low as diffused diffusion on all three timepoints. For the other two variables, the pattern for foreclosure was less consistent across time. Moratorium and carefree diffusion (which were not significantly different from one another on the three work engagement variables) were somewhat situated in between achievement and diffused diffusion. Finally, with respect to depressive symptoms, achievement, foreclosure, and, to a lesser extent, carefree diffusion, had the lowest scores at T1–3, whereas diffused diffusion was characterized by the highest scores.

Multivariate analyses of covariance with mean organizational tenure and job variety (i.e., the two job context variables which differed significantly among the clusters) as covariates were conducted. Adding these controls did not substantially change the results, except that the univariate F -value for absorption at T2 ($F(4, 285) = 2.60, p > .05, \eta^2 = .02$) was no longer significant (and, hence, no meaningful cluster differences could be identified). As 100 out of 290 participants reported that they did not have the exact same job at T2 or T3 as compared to T1 (e.g., they received a promotion within the same company, they changed jobs, or they started working part-time instead of full-time), these 100 participants were excluded in an additional set of multivariate analyses

Table 3
Univariate ANOVA's and Post-hoc Cluster Comparisons Based upon Tukey HSD Tests for the Five Identity Clusters.

Variables	Clusters					F-value	η^2
	Achievement	Foreclosure	Moratorium	Carefree diffusion	Diffused diffusion		
<i>Time 1</i>							
Exhaustion	1.72 (0.79) ^a	1.78 (0.63) ^a	2.25 (0.75) ^b	2.03 (0.77)	2.33 (0.76) ^b	7.43 ^{***}	.09
Cynicism	1.92 (1.12) ^a	1.85 (0.79) ^a	2.24 (1.02)	1.92 (0.75) ^a	2.54 (0.98) ^b	5.34 ^{***}	.07
Vigor	4.01 (0.63) ^a	3.60 (0.72) ^b	3.49 (0.70) ^b	3.37 (0.74) ^b	3.27 (0.81) ^b	6.63 ^{***}	.09
Dedication	4.40 (0.61) ^a	3.87 (0.83) ^b	3.84 (0.89) ^b	3.81 (0.77) ^b	3.38 (0.88) ^c	8.38 ^{***}	.11
Absorption	3.87 (0.80) ^a	3.39 (0.75) ^{bc}	3.54 (0.78) ^{ab}	3.49 (0.72)	3.54 (0.78) ^c	5.66 ^{***}	.07
Depressive symptoms	0.45 (0.35) ^a	0.57 (0.39) ^{ab}	0.77 (0.43) ^{bc}	0.63 (0.44) ^{ab}	0.77 (0.43) ^c	10.89 ^{***}	.13
<i>Time 2</i>							
Exhaustion	2.03 (0.71) ^a	2.02 (0.78) ^a	2.20 (0.60)	2.10 (0.72) ^a	2.48 (0.75) ^b	3.76 ^{**}	.05
Cynicism	1.94 (0.78) ^a	2.03 (0.78) ^a	2.26 (0.85) ^a	2.13 (0.68) ^a	2.74 (0.86) ^b	7.91 ^{***}	.10
Vigor	3.73 (0.56) ^a	3.46 (0.69) ^a	3.41 (0.65) ^{ab}	3.45 (0.63) ^a	3.07 (0.67) ^b	5.82 ^{***}	.08
Dedication	4.12 (0.57) ^a	3.83 (0.72) ^a	3.77 (0.85) ^a	3.74 (0.66) ^a	3.30 (0.77) ^b	7.30 ^{***}	.09
Absorption	3.75 (0.70) ^a	3.34 (0.68) ^b	3.46 (0.72)	3.45 (0.71)	3.18 (0.68) ^b	3.85 ^{**}	.05
Depressive symptoms	0.59 (0.45) ^a	0.65 (0.37) ^a	0.75 (0.43)	0.75 (0.37)	0.96 (0.56) ^b	5.03 ^{***}	.06
<i>Time 3</i>							
Exhaustion	2.01 (0.71) ^a	2.06 (0.82) ^a	2.17 (0.64)	2.12 (0.67)	2.48 (0.75) ^b	1.73 [*]	.05
Cynicism	1.81 (0.72) ^a	2.22 (0.78)	2.20 (0.78)	2.26 (0.75) ^b	2.55 (0.88) ^b	4.84 ^{***}	.06
Vigor	3.78 (0.59) ^a	3.42 (0.74)	3.45 (0.70)	3.45 (0.63)	3.12 (0.66) ^b	5.17 ^{***}	.07
Dedication	4.19 (0.52) ^a	3.79 (0.63) ^b	3.84 (0.79) ^{bc}	3.71 (0.62) ^b	3.34 (0.81) ^c	8.65 ^{***}	.11
Absorption	3.83 (0.57) ^a	3.47 (0.58) ^{bc}	3.54 (0.74) ^{ab}	3.41 (0.61) ^{bc}	3.19 (0.70) ^c	5.55 ^{***}	.07
Depressive symptoms	0.59 (0.50) ^a	0.65 (0.38) ^a	0.73 (0.40)	0.64 (0.38) ^a	0.90 (0.51) ^b	4.03 ^{**}	.05

Note. A cluster mean is significantly different from another mean if they have different superscripts. A mean without a superscript is not significantly different from any other mean. Standard deviations are in parentheses.

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

of covariance for the outcome variables at T2 and T3 because job characteristics were only assessed at T1 (i.e., with respect to their specific job at T1). Again, only the univariate F -value for absorption at T2 ($F(4, 178) = 0.73, p > .05, \eta^2 = .02$) was no longer significant.

Finally, repeated measures analyses of variance were used to investigate possible time \times cluster interaction effects, possibly revealing different patterns of change over time in the dependent variables for the various clusters (Braet & Beyers, 2009). To this end, the design consists of one within-subjects factor (time) and one between-subjects factor (cluster). The dependent variables are repeated measures of job outcomes and depressive symptoms. The interaction effect reached significance for job cynicism ($F(8, 568) = 2.04, p < .05, \eta^2 = .03$). Ancillary analyses demonstrated that cynicism increased across time only in individuals belonging to the carefree diffusion cluster ($F(2, 50) = 6.46, p < .01, \eta^2 = .21$) and the foreclosure cluster ($F(2, 66) = 5.09, p < .01, \eta^2 = .13$). Additional repeated measures analyses of covariance with mean organizational tenure and job variety as covariates did not substantially change the latter results. When excluding the 100 participants who did not have the exact same job at T2 or T3 as compared to T1, the interaction effect for job cynicism failed to reach significance ($F(8, 354) = 1.37, p > .05, \eta^2 = .03$).

Discussion

The present study was the first to (a) empirically derive identity statuses in young adult employees, (b) examine whether these statuses differed on various demographic and job characteristics, and (c) relate the obtained statuses to indicators of burnout and engagement, both concurrently and prospectively over a 1-year period. Five meaningful identity statuses were obtained. With respect to job demands and resources, there were only limited differences among the statuses. However, with respect to job outcomes, substantial differences were found across time.

Identity Statuses in Young Adulthood

Similar identity statuses were identified as compared to previous studies on high school and college students (Luyckx et al., 2005, 2008, 2009), again testifying to the validity of Marcia's (1966) identity status paradigm. More specifically, achievement, foreclosure, moratorium, and two diffusion (i.e., a carefree and diffused variant) statuses were empirically derived. First, individuals in the achievement status were characterized by an open and exploratory outlook on life in combination with firm identity commitments and future plans. Individuals in the foreclosure status, however, were also characterized by relatively strong identity commitments (although not as strong as for achieved individuals) but rigidly adhered to them, unwilling to thoroughly explore different options. Second, individuals belonging to the moratorium status scored as high on pro-active exploration as achieved individuals. However, they combined these high scores on exploration with low scores on the commitment dimensions and a high score on ruminative exploration. Apparently, these individuals were unable to close down the exploration process and kept on worrying where their lives would lead them. Finally, whereas both diffusion statuses were characterized by low scores on the commitment dimensions, individuals in the diffused diffusion status tried to explore future life-plans but did so in a disorganized, haphazard, and ruminative fashion and, consequently, failed to secure a sense of identity. Individuals in the carefree diffusion status, however, did not invest energy in a thorough exploratory process and seemed to rather enjoy their uncommitted state of postponing future plans and goals (Skorikov & Vondracek, in press).

When looking at how the clusters were related to depressive symptoms, the present findings were in line with previous research, further validating the obtained cluster-solution. The achievement and foreclosure statuses scored significantly lower on depressive symptoms as compared to the diffused diffusion status, again testifying to the importance of having strong identity commitments for one's well-being. The moratorium and carefree diffusion statuses scored in-between, with the latter status scoring somewhat lower on depressive symptoms. Apparently, investing in identity exploration without having strong commitments can come with psychosocial costs, partially due to the tendency of moratorium individuals to worry about different future options.

Despite the fact that our sample comprised 21 to 40 year olds, only a minority of our participants were classified in the achievement status (Kroger, 2007a), generally being conceived of as the optimal identity status. Given that virtually all participants followed some post-secondary education in the past (being an ideal time for identity exploration and experimentations; Arnett, 2000), it is likely that some individuals mainly explored different future plans when they were students. Some participants possibly abandoned this information-oriented approach towards identity issues and settled (or foreclosed) on identity commitments or were unable to do so (in the case of diffusion) (Meeus, van de Schoot, Keijsers, Schwartz, & Branje, 2010). Hence, future longitudinal research should track identity trajectories through adolescence well into young adulthood.

Work-Related Outcomes

With respect to job demands and resources, limited differences were obtained among the statuses. On pace of work, emotional workload, role conflict, task autonomy, and social support from colleagues, there were no differences among the identity statuses. Apparently, there is no direct relationship between different types of jobs and the employees working in these jobs, at least not in terms of their identity status. With respect to job variety, achieved individuals perceived that their jobs were in line with their actual skills and that there was a substantial amount of variety present in their jobs, more so than individuals belonging to diffused

diffusion, foreclosure, and moratorium did. This finding suggests that the reflexivity involved in developing a life-plan and future goals could result in finding a challenging job that suits one's abilities and skills (Côté, 1996; Skorikov, 2008).

Despite this lack of profound differences among the statuses in job demands and resources, individuals did function substantially different in their jobs depending on their identity status. Further, these differences remained rather stable across time. As expected, achieved individuals scored substantially higher on work engagement and substantially lower on burnout as compared to individuals classified in the diffused diffusion status, extending previous research demonstrating the pervasive influence identity formation exerts on psychosocial functioning in different contexts (Kroger & Marcia, *in press*). Foreclosed individuals scored as low as achieved individuals on indices of burnout across time, although, at T3, they also did not differ from individuals in diffused diffusion on job cynicism. However, they scored significantly lower on dedication and especially absorption, not differing from diffused individuals with respect to the latter variable. Apparently, although foreclosed individuals are not necessarily experiencing more burnout than their achieved counterparts, they do feel less immersed and involved in and enthusiastic about their work. This finding is in line with previous research demonstrating that foreclosed individuals feel less autonomous and personally expressive than achieved individuals (Luyckx et al., 2009; Waterman, 2007). Again, the moratorium and carefree diffusion statuses scored in-between the other statuses, with somewhat different findings at the different time assessments. In sum, the differentiation among the different identity clusters depended somewhat on the outcome variable under study. Summarizing across the different outcome measures, and as could be expected based on previous identity research in high school and university samples, the findings did indicate that individuals in the foreclosure and especially the achievement clusters fared substantially better than those in the diffused diffusion cluster (with some important differences existing between the former two clusters on outcome measures indexing work engagement). Apparently, especially the strength and experienced security of and identification with identity commitments, coupled with the degree to which individuals worry or ruminate about possible identity choices, are important factors towards psychosocial functioning in different contexts (Luyckx, Schwartz, Berzonsky, et al., 2008).

Further, probably due in part to the short time span under study, there were only limited mean-level changes in burnout and engagement: exhaustion and cynicism tended to increase whereas vigor tended to decrease across time. Additional analyses demonstrated that mean-level changes in cynicism were somewhat moderated by cluster membership, indicating that such increases in cynicism were found only in the foreclosure and carefree diffusion statuses. Apparently, individuals belonging to these specific identity statuses are especially vulnerable to become more cynical about their job across time. Different mechanisms might be causing this change. As mentioned before, in the case of foreclosure, individuals did not thoroughly explore possible future life-plans and potentially committed themselves to a job that they not fully endorsed, a phenomenon that Skorikov (2008) would refer to as experiencing work as a job instead of as a calling. In the case of carefree diffusion, however, these individuals did not invest much energy in identity-related work and probably chose a job partially based on circumstantial factors. Future research should determine if being identity diffused might render employees more vulnerable for job turnover (or floundering as evidenced in an apparently meaningless succession of jobs; Super, 1957), absenteeism, and ill-health.

Inspired by theories such as the conservation of resources theory (Hobfoll, 1989) and the identity capital model (Côté, 1997), the present results could be understood in light of identity formation being a personal resource affecting job-related outcomes. Personal resources are defined as positive self-assets open to development and change that are linked to resiliency, stimulate personal growth, and refer to individuals' ability to impact successfully on their environment. Due to such personal resources, individuals experience high levels of accordance between their skills and talents and the goals they set for themselves (Hobfoll, 2002; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Hobfoll (2001, p. 342) listed a number of possible resources and some of these resources explicitly referred to identity formation as operationalized in the present study, such as "Feeling that I know who I am", "Knowing where I am going with my life", and "A sense of commitment". Further, major resources are typically linked to one another and exert their overall protective influence in tandem (i.e., resource caravans; Hobfoll, 2001). Identity achievement has been found to relate to high self-esteem, internal locus of control, high self-efficacy, and adequate coping styles (Kroger & Marcia, *in press*). Hence, rather than identity formation being an isolated phenomenon, the host of variables associated with it probably co-determined its effects on the various job-related outcomes measured in the present study.

Limitations and Suggestions for Future Research

First, the sample was quite homogeneous in terms of ethnicity, educational level, and work sector, limiting the generalizability of the results. For instance, because the present sample consisted mainly of individuals having a degree of post-secondary education, future research should sample individuals from lower educational backgrounds. Cluster analysis is an empirically driven statistical approach and, as such, the outcomes are contingent upon measure and sample characteristics. Hence, future research should investigate whether the cluster solution obtained can be replicated in diverse samples of employees stemming from different organizations and having different occupations. Second, data were gathered through self-report questionnaires. Although questionnaires are most appropriate to gather information about internal and subjective processes such as identity development, the sole reliance on a single informant may artificially inflate correlations among constructs. Third, future longitudinal research should examine possible mediators that could (partially) explain the obtained relationships between identity status and job outcomes. As noted in the introduction, a likely candidate is the degree to which one's job fits with one's actual interests under the hypothesis that individuals in different identity statuses would select jobs that are in line with their actual interests and potentialities to different degrees. Future research should also focus on possible reciprocal relationships between job outcomes and identity formation (Xanthopoulou et al., 2009), for instance whether work engagement leads individuals to become more identity achieved, or, vice versa, whether experiencing burnout makes individuals become more

identity diffused across time. Finally, one's occupation and career represent important aspects of how young adults construct their life-paths and see their future (Blustein, 2006; Kroger, 2007b). Skorikov and Vondracek (2007) indeed found that occupational identity played a leading role in the global process of adolescent identity formation. Consequently, future research should determine the degree to which the identity questionnaire used is related to neo-Eriksonian measures tapping into occupational identity, such as the Commitments to Career Choices Scale (Blustein, Ellis, & Devenis, 1989).

In sum, provided that the present results are replicated, they could inform the development and implementation of interventions to protect against burnout and lowered work engagement in young adults. An important focus of studies on burnout reduction has been on interventions to enhance the capacity of individuals in coping with various stressors at the workplace. Research findings on the successfulness of such interventions have been mixed (Maslach et al., 2001). The present findings indicate that a focus on developmental differences in identity formation and, by extension, the internal resources the individual has at his or her disposal (besides job resources; Schaufeli & Bakker, 2004) might be a useful complement to existing intervention programs (Schaufeli, 2004).

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