Rasmus Mannerström

Uncertain Future Plans

Personal Identity among Finnish Youth and Its Links with Well-being, Digital Engagement and Socio-economic Circumstances

UNIVERSITY OF JYVÄSKYLÄ

FACULTY OF EDUCATION AND
PSYCHOLOGY

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JYVÄSKYLÄN YLIOPISTO
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ABSTRACT

For this dissertation I studied personal identity formation among Finnish adolescents and young adults and its links with well-being, digital engagement and socio-economic circumstances, referring to occupation, incomes and key developmental transitions experienced in young adulthood. Experiencing a sense of identity, defined as coherence, direction and meaning in life, is critical for individuals' psychological well-being and social integration. Sociological theory and studies suggest that maintaining a sense of identity has become more difficult than in the past, prolonging the task from adolescence well into adulthood. At the same time, adolescents and young adults have new tools and are developing new competencies to manage increasing contingency. Three studies were conducted, where the Dimensions of Identity Development Scale (DIDS) was employed to measure multiple aspects of exploration and commitment within the identity domain of general future plans. Study 1 ($N = 751$, M_{age} = 24.6, 60.3% women) showed a relatively high prevalence of identity diffusion among Finnish young adults. In addition, positive identity development was associated with strong well-being and both past and present economic status. Study 2, conducted among a high-school sample ($N = 932$, M_{age} = 17.1, 69% women), showed that identity formation was related to digital practices and competencies. Study 3, in a longitudinal sample of young adults (measured at ages 24 and 29; $N = 854$, 63% women), showed that identity exploration and commitment processes decreased during this life-phase. Moreover, these changes were moderated by developmental transitions such as becoming a parent and achieving education-related full-time employment. Further, parenthood was the variable most strongly linked with positive identity development. In conclusion, the results suggest that identity is a major challenge for Finnish young adults still in their mid and late twenties, with commitment issues being more enduring and dynamic than hitherto recognised. A sense of identity, in this case certainty regarding one's future plans, remains in flux depending on the individual's social and economic circumstances. Cultural context may further moderate how identity uncertainty is tolerated. Similarly, digital engagement operates as an extension of mind and advanced digital competence (cf. digital literacy) seems to support positive identity development.

Keywords: personal identity, prolonged adolescence, person-oriented approach, psychological well-being, digital engagement, developmental tasks

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TIIVISTELMÄ (FINNISH ABSTRACT)

Väitöskirjassa tutkin suomalaisten nuorten ja nuorten aikuisten persoonallista identiteettiä ja sen yhteyksiä psyykkiseen hyvinvointiin, digitaalisten laitteiden käyttöön ja sosioekonomiseen tilanteeseen, jossa viimeksi mainitulla viittaan niin ammattiin, tuloihin kuin nuorten aikuisten läpikäymiin, keskeisiin kehitystehtäviin. Yleisellä tasolla identiteetillä tarkoitetaan tunnetta minän samuudesta ja jatkuvuudesta menneisyyden, nykyisyyden ja tulevaisuuden välillä. Tästä syntyvä kokemus suunnasta ja merkityksestä elämässä on kriittinen psyykkisen hyvinvoinnin ja sosiaalisen integraation kannalta. Sosiologinen teoria ja useat tutkimukset viittaavat siihen, että identiteetin rakentamisesta on tullut haasteellisempaa ja epävarmempaa kuin ennen, pidentäen näin nuorten siirtymistä aikuisuuteen. Samanaikaisesti nuorilla ja nuorilla aikuisilla on kuitenkin käytettävissään uusia työkaluja ja taitoja, joilla vastata epävarmuuteen. Kolmessa tutkimuksessa arvioin yhtä persoonallisen identiteetin osa-aluetta mittaamalla tulevaisuuden suunnitelmien pohdintaa ja niihin sitoutumista useilla eri ulottuvuuksilla, käyttäen hyväkseni The Dimensions of Identity Development Scale-mittaria (DIDS). Ensimmäinen tutkimus (N = 751, M_{age} = 24,6, 60,3% naisia) osoitti identiteettiin liittyvän epävarmuuden olevan suhteellisen yleistä suomalaisten nuorten aikuisten keskuudessa. Identiteetin selkeys oli puolestaan vahvasti sidoksissa psyykkiseen hyvinvointiin ja hyvään taloudelliseen asemaan niin menneisyydessä kuin nykyisyydessä. Lukiolaisilla suoritettu toinen tutkimus (N = 932, M_{age} = 17,1, 69% naisia) puolestaan osoitti identiteetin linkittyvän digitaalisten laitteiden käyttöön. Pitkittäisaineistolla tehty kolmas tutkimus (mitattu 24- ja 29-vuotiaana; N = 854, 63% naisia) taas osoitti identiteetin etsintä- ja sitoutumisprosessien heikentyvän tämän elämänvaiheen aikana. Näiden prosessien kehitykseen vaikutti kuitenkin suoriutuminen keskeisistä kehitystehtävistä, kuten koulutusta vastaavan kokopäivätyön saavuttaminen ja vanhemmaksi tuleminen. Lisäksi, vanhemmuus oli kaikkein voimakkaimmin yhteydessä positiiviseen identiteetin kehitykseen. Yhteenvetona voidaan todeta, että tulosten mukaan nuorten aikuisten identiteetin kehitys tulevaisuuden suunnitelmien kannalta on vielä täysin kesken. Lisäksi, sitoutumiseen kytkeytyvät tekijät näyttäytyvät monimutkaisempina kuin tähän mennessä on luultu. Identiteetin tunteeseen vaikuttaa yksilön sosiaaliset ja taloudelliset olosuhteet ja laajempi yhteiskunnallinen konteksti kuten valtion tarjoamat tukiverkot. Vastaavasti, digitaalisella osaamisella (vrt. digitaalinen lukutaito) voi tukea positiivista identiteetin kehitystä. Digitaalisen osaamisen kautta voi esimerkiksi kehittää omia taitojaan ja samalla parantaa mahdollisuuksiaan verrata eri tulevaisuuden vaihtoehtoja ja sitoutua niihin.

Avainsanat: persoonallinen identiteetti, pitkittynyt nuoruus, henkilösuuntautunut lähestymistapa, psyykkinen hyvinvointi, digitaalisten laitteiden käyttö, kehitystehtävät

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LIST OF ORIGINAL PUBLICATIONS

I   Mannerström, R., Hautamäki, A., & Leikas, S. (2016). Identity status among young adults: Validation of the Dimensions of Identity Development Scale (DIDS) in a Finnish sample. *Nordic Psychology, 69*, 195-213.

II   Mannerström, R., Hietajärvi, L., Muotka, J., & Salmela-Aro, K. (2018). Identity profiles and digital engagement among Finnish high school students. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 12*. doi: 10.5817/CP2018-1-2.

III   Mannerström, R., Muotka, J., & Salmela-Aro, K. (2019). Associations between identity processes and success in developmental tasks during the transition from emerging to young adulthood. *Journal of Youth Studies*, 1-19. doi: 10.1080/13676261.2019.1571179.

Taking into account the instructions given and comments made by his co-authors, the author of this thesis applied both independently and previously collected data, conducted the analyses, and drafted this dissertation report on the three publications.

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1   INTRODUCTION

[T]he need for choice [is] the forerunner of conflict. (Mead, 1928, 202)

I cannot readjust, help
something's missing
Grip slips,
Without claws you cannot hold on
Sensitive,
uncertain
lonely
united only in the feeling that there is no us

"Kynnet, kynnet" ["Claws, claws"; own translation from Finnish], song and lyrics by
Pyhimys feat. Vesta (2017, copyright permission granted by Universal Music Finland)

This research addressed personal identity formation and related psychosocial
correlates among Finnish adolescents and young adults coming of age in the
digitalised, late modern age. Research on identity, in general, is vital because a
sense of identity, portrayed as knowing who you are and where you are heading
in life, is integral to psychological well-being throughout life. Thus, identity is
not only a question of individual well-being but also of the prosperity of the
society as a whole. The predominant concern over identity today is that late
modern societies pose serious challenges to achieving a stable sense of self,
increasingly leaving individuals in a state of confusion. For instance, poor and
unpredictable employment prospects coupled with seemingly endless life path
opportunities complicate decision making and commitment to future plans and
postpone completion of the developmental tasks (transitions) expected of young
adults. In these circumstances, digital technology and related practices may both
support and impair youth's identity consolidation.

Today, despite evident societal transformations, research has mainly fo-
cused on identity in adolescence or its subjective experience at different life
stages (Arnett, 2014). Research employing a statistical-structural approach to

identity formation processes beyond adolescence has been scarce. Little is known about how personal identity is related to well-being in young adulthood or how it interacts with the completion of the developmental tasks of that life stage, now that they are increasingly being postponed. There is also little specific knowledge on how today's Finnish youth negotiate their personal identity, what identity statuses emerge in the Finnish context and how they are related to contextual factors such as well-being and socio-economic circumstances. The Finnish socio-cultural environment, however, offers a unique context for identity formation in a global perspective. The Finnish welfare state provides broad social and economic security networks for its citizens, especially its youth, and Finnish children and adolescents are offered education in digital competence, which is assumed to support identity exploration and commitments in the 21st century knowledge society.

Consequently, the aim of this research was to examine the identity formation processes of exploration and commitment and to determine what configurations of these (i.e., identity statuses) exist among Finnish adolescents and young adults and how they are associated with well-being, financial standing, digital engagement and success in developmental tasks. Here, digital engagement is used as an umbrella term for several different but related measures of digital competencies and practices (e.g., Hietajärvi, Seppä, & Hakkarainen, 2017). The phrase "socio-economic circumstances" used in the title of this thesis refers to both financial standing, occupation and success in developmental tasks. Further, developmental tasks refers here to four conventional life transitions that young adults are expected to complete on their way to adulthood, vis., independent living, marriage/cohabitation, obtaining education-related full-time employment and becoming a parent (e.g., Elder & Giele, 2009).

I will begin this introduction by contextualising and defining identity (research) and reviewing previous identity research and some of its shortcomings. I will then introduce the concept of developmental tasks and their presumed links with identity, followed by a presentation of digital engagement and its assumed relationship with identity in contemporary society. I will conclude with a formulation of the precise research questions and hypotheses addressed in the original studies.

1.1 Identity formation

Identity has become something of a buzzword, a key issue in contemporary society (Elliott, 2015; Niedzviecki, 2004). Côté (2006b) notes that studies focusing on "identity" have grown exponentially during the past few decades and that today identity is one of the most studied subjects in the social sciences. Probing the discontents of late modern societies, Bauman (2001) has interpreted this "discursive explosion around the concept of identity" (see Hall, 1996) as more illuminating about our times, that is, current values, ambitions and anxieties in society, than about identity as a phenomenon per se. Indeed, the current personal

and societal interest in identity is considered a product of changing societal conditions in general and individualism in particular (Elliott, 2015). For instance, the psychoanalyst Erik Erikson (1950; 1968) took identity out of psychiatry and made it mainstream at a time when there was growing concern over the rise of mass society, its anonymous bureaucratic control, the technological transformation of human activities and the expectation of a decline in community and traditions (e.g., Riesman, Glazer, & Denney, 1950; Stein, Vidich, & White, 1960). He defined identity as a sense of continuity and sameness of the self that results from making choices and committing to certain ideals, values, roles and future goals. Namely, compared to premodern societies, modern individuals were less restricted by ascribed positions (e.g., social class, ethnicity) than before but instead expected and encouraged to flexibly choose their own life path (Côté, 1996; Furlong & Cartmel, 1997).

It is this increase in individual freedom and compulsory choice-making that has led to the current existential "problem" of identity (see individualization theory: e.g., Bauman, 2001; Beck & Beck-Gernsheim, 2002; Giddens, 1991). Identity is about self-definition, such as recognising oneself both as a whole in time and as part of a larger community. It is about personal meaning through psychological and social integration, about how to fit in and be recognised in a society expecting self-realisation and providing less normative guidance than in the past (Baumeister, 1987; Elliott, 2015). In other words, a sense of identity is all but an isolated phenomenon; instead it is dynamically related to societal circumstances such as the contextual opportunities, tools and resources that we are provided with to form continuity in time. In Erikson's lifespan theory (1950; 1968), identity makes up only one factor, albeit a significant one among many that influence psychic life.

The current concern with identity, in turn, has evolved because the challenging societal conditions observed by Erikson and his contemporaries have continued unabated, and at an exponential pace (e.g., Bauman, 2001; Elliott, 2015; Gergen, 1991). Due to further social and economic structural changes, firm and stable commitments, the basis of a sense of identity, are increasingly difficult to achieve. It is only in the current, late modern psychic landscape, characterised by feelings of contingency, ambivalence and unpredictability (Johansson, 2006) that "being the same" (*identitas* in Latin*)* becomes a significant question.

1.1.1   Definitional issues

Alongside the expansion of identity research within the social sciences and the emergence of different and often conflictual ontologies and epistemologies, the concept has, however, become fragmented, leading to controversy over its proper meaning and use in research (for a discussion on its relation to concepts such as self, ego, personality etc. see Côté & Levine, 2002; Côté, 2006b). The identity research field today comprises multiple perspectives that differ in their take on social reality and social order and in their psychosocial focus. For instance, within the more psychologically and individually oriented strand of identity research it has been common to talk of a personally chosen and achieved, relatively

fixed *identity*, a quality or "thing" one either has or does not have (Marcia, 1966; e.g., S. J. Schwartz, 2001). In this perspective, the current social order is typically viewed as given and identity processes as universal and normative. Epistemologically, then, these researchers typically apply an objectivist approach, meaning that they view social reality as somewhat fixed and independent of human consciousness. This allows the use of statistical methods, generalisations and the categorisation of people according to shared features.

By contrast, in more sociologically oriented research, it has been common practice to speak of multiple, fluid, context-dependent, socially constructed and relationally achieved *identities* (e.g., Rattansi & Phoenix, 2005; Wetherell & Mohanty, 2010). These refer to publicly or "objectively" defined, temporary points of attachment and markers of personhood that an individual occupies but also uses strategically across situations (Hall, 1996). In this approach, the notion of identity (in the singular) has been considered from the very beginning as misleading and repressive because it implies an inner, static essence, which does not exist. Because social reality is indeterminate and dependent on social constructions, these researchers take a subjectivist approach. This typically entails applying qualitative methods to focus more on individual meaning-making and the contingent and flexible nature of identity. The attention is thus on identity issues as dependent on context as well as on arbitrary and repressive power relations in society. In this paradigm, *identities* have been contrasted with the term *subjectivity*, referring to the private self-understanding of who one is, one's location and of how one is prepared to act (Brubaker & Cooper, 2000; Wetherell, 2008).[1] In other words, despite or perhaps because of the increasing popularity of *identity*, definitional issues have made studying the phenomenon a formidable task (Côté, 2009).

It seems, however, that much of this conceptual confusion is due to the multidimensional nature of identity; that is, researchers fall into a category error, confusing different levels of analysis. In my own research I subscribe to Côté's (2006b; see also S. J. Schwartz, Luyckx, & Crocetti, 2015) distinction between three different but simultaneous manifestations of identity. First, at the intra-subjective level, identity denotes a sense of existence in time and individuality, that is, reflective self-consciousness (below cf. ego identity). Second, at the personal level, identity denotes behavioural patterns specific to the person, such as the future goals, values and beliefs that guide one's decisions (cf. personal identity below). Third, at the group level, identity denotes memberships in societal groups and the meaning the individual attaches to them (e.g., gender, nationality, cf. social identity below) (Côté & Levine, 2002). To summarise, an individual simultaneously "has" or occupies multiple personal and social attachments (cf. commitments) that vary in meaning and remain more or less in flux across situations and throughout the

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[1] In some Foucault-inspired research traditions, *identities* have been replaced by *subject positions*, referring to the multiple, discursively produced and negotiated positions that subjects (cf. individuals) inhabit and move between (Hepburn 2003). The term draws attention to the different rights and expectations that positions carry with them and, above all, the modes of action that they allow or enable.

life course. However, it is the level of stability in and integration of these attach-
ments that give rise to a sense of being "one", i.e., being identical with oneself
over time. In that sense, as Côté (2006b) remarks, it is problematic to speak of
"having an identity" or refer to demographic variables such as age or gender as
"identities". Everyone has always some objective, externally given identity, but
the sense of inner identity is a matter of degree rather than kind. It is our reflec-
tive self-consciousness that continuously attempts to narrate a coherent story of
the self in time (see also McAdams & Zapata-Gietl, 2015). In other words, we
imagine ourselves in the past and present and project ourselves into an unknown
future.

Hence, in contemporary societies, where gender roles, occupations and na-
tionalities are more fluid and uncertain, weaving a coherent self-narrative –
knowing "who one is" or "where one is heading" – has become increasingly chal-
lenging. That is, because our current cultural context is deemed to be in greater
flux and because our commitments and the positions we hold are more short-
term, unpredictable and uncertain than before, our inner sense of continuity is
destabilised and difficult to maintain. In this respect, all three levels of identity
are linked and intersubjective achievements; the sense of identity is both fluid
and stable, coherent and fragmented as well as personally and socially con-
structed (Vignoles, Schwartz, & Luyckx, 2011). In this dissertation research, the
"unmodified" form – identity – is at times used interchangeably to refer to the
three levels, that is, to both its subjective and objective aspects. Moreover, alt-
hough this research focuses on only one personal identity domain (i.e., general
future plans), it is assumed that this domain forms a core component of a sense
of continuity in time due to its central role for self-narration (Nurmi, 1991).

Epistemologically, the present research is located within the field of iden-
tity status research (Marcia, 1966), which is the most popular empirical paradigm
of identity research inspired by Erikson's identity theory (Erikson, 1968). Con-
ventionally, identity status research has built on an individual, objectivist and
universalistic approach to identity. That is, identity is viewed as a measurable
and generalisable property of the person, an individual achievement that takes
place in a rather static environment. My own research, targeting identity for-
mation on the population level, continues this line of research by using statistics
to categorise and generalise. However, my research also incorporates a view of
society as continuously changing and identity as dependent on societal processes
(viz. individualization, Beck & Beck-Gernsheim, 2002), and thus conceives of
identity as intersubjectively constructed and constrained. Building on previous
theory (Born, 2007; Côté, 1996; 2006c; Kraus, 2007), I adhere to the view that soci-
etal transformations such as individualisation may be captured by examining, for
instance, differences in identity status distributions or processes over time and
across cultures. In other words, I argue that employing an objectivistic, statistical
perspective on identity formation does not (outside specific research questions
and statistical methods) exclude a view of identity as simultaneously fluid and
context-dependent. Moreover, neither my perspective nor this work exclude or

detract in any way from the value and importance of more subjectivist approaches to identity. More important is to define and delimit in what circumstances the results apply.

1.1.2   Erikson on identity

Based on his extensive clinical and field work, the psychoanalyst Erik Erikson (1950; 1968) maintained that healthy psychological development is both continuous and dynamic throughout life. He identified eight, normative and dynamic psychosocial processes that are all present from infancy to late adulthood and that must continuously be negotiated. However, due to biological, psychological and sociocultural factors, each process becomes a challenge at a predetermined point in life (the processes are therefore often referred to as stages, tasks or crises). The challenge must be confronted and at least temporarily solved for further development to take place. That is, how each challenge is settled influences the resolution of later crises and hence the vitality and psychological well-being of the individual during the life cycle. While tasks that are prominent in infancy (such as gaining a sense of trust) are more biologically driven and universal, the outcome lying beyond the individual's conscious control (i.e., dependent on parental care), the later ones are more culturally determined, historically set expectations where individual agency matters (e.g., gaining a sense of generativity). In other words, the tasks can be envisaged as crossings where further development may either proceed optimally or get mired, hampering the resolution of other tasks. Nonetheless, the tasks themselves are never completely, once-and-for-all settled (hence they are conceived as processes). Instead they represent a sort of ceaseless movement, demanding continuously to be reclaimed and resolved anew as social conditions change.

According to Erikson (1950; 1968), gaining a sense of identity is the core task of adolescence. He argued that physiological growth, coupled with societal expectations of becoming an autonomous and responsible adult, simultaneously allow and require that adolescents start exploring their future options and make decisions. Becoming an individual – an adult, however, is a time of separation, individuation and increasing loneliness. Peers become the most important reference group with whom thoughts, anxieties and future plans are explored. Hence, the crisis of adolescence is about exploring, making choices and committing to ideals, values, roles and future goals offered by society, that is, to start dating and preparing for a career, marriage and family life. Erikson (1968) noted that in the United States, as early as the 1950s, recognition of the centrality of identity had created an institutionalised *psychosocial moratorium* for adolescents, that is, a time relatively free of duties that allowed adolescents to explore their options before making final decisions.

In effect, predictability and coherence in one's "objective" identity commitments (i.e., both personal and social) yield a subjective sense of *ego identity*, that is, an inner awareness of continuity, sameness and uniqueness of the self (i.e., self as distinct from others), but one also recognised as such by others (1968, 50). The

awareness of temporal-spatial existence – the self across time and space – is, however, the sine qua non of ego identity (e.g., Erikson, 1964, pp. 95-96). There must be, so to say, "a present with an anticipated future" (1968, 30). Conversely, those who cannot decide on workable goals and get mired in the identity crisis, suffer from *role confusion* and lack of direction (Erikson, 1950; 1968).

As these processes are interdependent on each other, identity questions are more easily managed if previous tasks have been optimally solved. For instance, Erikson (1950; 1968) claimed that identity formation is dependent on a sense of industry, optimally developed during the early school years (age 7-12). The child must first learn to master the core technologies (cf. competencies) of work and communication (e.g., reading and writing), to truly take part in identity exploration and commitment. Similarly, a sense of identity affects the successful resolution of later tasks such as engaging in intimate relationships and generativity. For Erikson, however, identity was the most significant process and challenge in life, more important than any other. It binds together all the stages of life and determines well-being throughout life (1968, 91). The more integrated the self, the easier it is to stay focused, motivated and productive in life, that is, experience meaning. That said, Erikson was acutely aware of the complexities and fuzziness of the whole subject matter and called identity an "unfathomable" phenomenon (Erikson, 1968, 9).

Finally, for the purposes of this research, I will here recall one of the enduring core critiques of Erikson's identity theory. Although Erikson repeatedly stated that psychosocial crises, and especially identity were dependent on the sociohistorical context and contingent institutions (1968, 23-24, 27), Erikson's description of the stages as normative intra-individual tasks situates the responsibility for the outcome mainly in the individual. Slugoski and Ginsburg (1989) pointed out that if the goal of development is adaptation and the context is assumed to be harmonious, then failure in a task essentially means either a psychological or moral deficit in the individual: psychological, in that the individual lacks some necessary psychological capacity to make the right decision, and moral in that the individual refuses to make the right decision. Either way, consideration is not given to societal circumstances such as inequalities in opportunities dependent on gender, social class and ethnicity (see also Rattansi & Phoenix, 2005). Indeed, Slugoski and Ginsburg (1989) deemed Erikson's developmental theory as descriptive mainly of privileged, white, middle-class men in the United States and thus overly individualistic and repressive in its goals. A rebuttal could be that while Erikson's theory was descriptive only of a restricted group at a specific time, socio-cultural transformations in western countries over the last few decades have made identity issues relevant and pressing for a much larger proportion of the population than in the past. This recent historical development accords well with Erikson's view on the contextual nature of identity issues.

1.1.3 Marcia's identity status paradigm

The most influential empirical research paradigm inspired by Erikson's identity theory is the identity status model developed by James Marcia (1966; 1993; S. J. Schwartz, 2001). Employing semi-structured interviews, Marcia (1966) targeted adolescents' ego identity by measuring the presence of (objective) commitments in life domains such as occupation, politics and religion. He also underscored the importance of the autonomous exploration of alternatives as an indicator of mature and healthy identity development. By crossing the two dimensions, Marcia was able to assign his subjects into one of four identity statuses: *achievement* comprises individuals who have explored different options and have successfully arrived at firm commitments. *Foreclosure* characterises individuals who have also established firm commitments but without prior exploration. These individuals typically adhere to their parents' or other authority figures expectations. Individuals in the status labelled *moratorium*, in contrast, lack firm commitments but are currently exploring their alternatives. They are currently experiencing the "identity crisis". Finally, *diffusion* comprises individuals who lack commitments and interest in exploring their options. This group could be described as drifting around and living in the moment, without either the will or capacity to commit.

According to the developmental hypothesis, development proceeds in general from diffusion either to foreclosure or through moratorium to achievement, which is considered the most mature status (Waterman, 1982). A wealth of studies have shown the four statuses to be differentiated in terms of personality characteristics, cognitive processes and interpersonal behaviour, most notably with achieved and foreclosed individuals being best off and the diffused worst off in terms of psychological well-being (Kroger & Marcia, 2011). The "weakness" of the foreclosed identity, however, in comparison to the achieved one is that, although both have attained a sense of identity, the externally determined commitments that characterise the former render it rigid and vulnerable to psychosocial problems if faced with unexpected challenges later in life.

Although identity statuses are assumed to operate differently across and within domains, individuals have commonly been assigned an overall or global identity status based on the mean (Grotevant, 1993; e.g Marcia, 1993; Waterman, 1985). This global identity status is assumed to be indicative of an underlying "unitary structure" of personality, in other words ego identity, which in turn is predictive of domain-specific statuses (Kroger, 1993; van Hoof, 1999). Identity status research has during the past decades expanded into identity domains such as family and career (Archer, 1985), friendship and dating (e.g. Grotevant, Thorbecke, & Meyer, 1982), leisure time (Jones, Hartmann, Grochowski, & Glider, 1989), marriage and parenting (Marcia, Waterman, Matteson, Archer, & Orlofsky, 1993), values, philosophical lifestyle and hobbies (Balistreri, Busch-Rossnagel, & Geisinger, 1995) and ethnicity (Phinney & Rosenthal, 1992). This expansion has prompted research to shift from in-depth interviews suitable for small samples to the use of a series of objective, Likert-type scales suitable for mass sampling

(Bennion & Adams, 1986; Bosma, 1985; Dellas & Jernigan, 1987; Grotevant & Adams, 1984). Moreover, the so called neo-Eriksonian identity research (S. J. Schwartz, 2001) has in recent decades either extended status research by adding dimensions (e.g., personal expressiveness, Waterman, 1990), or moved beyond statuses by, for instance, examining in more detail the links between identity and culture, that is, the contextual resources needed for healthy identity development (Côté, 1996).

Identity status research has been rare in Finland. Exceptions include the longitudinal studies of Finnish (young) adults by Fadjukoff (2007) and her colleagues (Fadjukoff, Pulkkinen, & Kokko, 2016). Participants were interviewed several times between ages 27 and 50 regarding their identity status development in the identity domains of religious beliefs, politics, occupational career, intimate relationships and lifestyle. The studies found that the participants, in general, progressed towards achievement during the study period in all domains except politics. Second, the respondents felt that identity formation was a more challenging task than earlier. Furthermore, identity statuses were associated with background factors such as previous school success and family socio-economic status (as in parental education and occupation), suggesting that identity development is not a uniform task across social and historical contexts.

1.1.4 Critique and shortcomings

Although identity status research has resulted in a broader and deeper understanding of factors related to personal identity in adolescence, several authors have pointed to shortcomings in Marcia's research paradigm. For instance, Côté and Levine (1988) and van Hoof (1999) have argued that the Marcia's identity status model lacks construct validity because it assesses personal identity instead of ego identity. That is, there is no evidence of a direct link between the conscious and uttered presence of commitments across different life domains, the so called the behavioural aspect of identity, and the targeted, more unconscious subjective experience (i.e., process) of continuity and sameness. The authors also criticised the widespread practice of talking about identity *development* in identity status studies based on cross-sectional data. Strictly speaking, if no longitudinal data are available and analyses of change in identity are absent, then the statuses only represent snapshots of an assumed developmental trajectory.

Another, related core assumption of the identity status model has been that a so called global identity (cf. overall sense of continuity corresponding to ego identity) can be calculated based on the mean level of progress across different life domains (Marcia, 1966). As the life domains studied have increased and incongruences across domains have been spotted (Goossens, 2001; Pastorino, Dunham, Kidwell, Bacho, & Lamborn, 1997; S. J. Schwartz, 2001), it has become problematic and somewhat arbitrary to assign a single overarching, global identity status to individuals. That is, the mean level of achievement of identity statuses across domains does not necessarily correspond to a "deep structure" of identity (i.e., ego identity) and therefore identity status progress should be investigated separately across domains (S. J. Schwartz et al., 2015; van Hoof, 1999).

Further, van Hoof (1999) has questioned the validity of the four statuses. She has argued that although achievement and diffusion have generally been distinguished across a multitude of external variables, the foreclosure and moratorium statuses have not shown the same clarity or strength in correlations. In other words, the existence of four clearly separable psychological constellations (instead of just two) is somewhat dubious.

Furthermore, the evidence on the *developmental hypothesis* (Waterman, 1982), that is, that identity develops linearly from diffusion to achievement (or foreclosure) as a fixed end-point, has been inconclusive. According to Meeus (2010) and Kroger, Martinussen and Marcia (2010), longitudinal studies show hardly any progression between identity statuses in adolescence and young adulthood, suggesting that identity statuses are more akin to lasting personality traits. On the other hand, Meeus (2018) claims that longitudinal studies with more recent process models of identity formation (presented below) have shown identity maturation during adolescence and young adulthood.

Finally, a related assumption of the identity status model has been that given an "average expectable environment" identity development is a normative and universal task (Marcia, 1966), which is to say that personal identity develops uniformly for everyone. However, adolescents, or adults for that matter, do not inhabit equivalent contexts. Adolescents are divided by different environments that offer different resources and opportunities, enabling or blocking identity development (Côté, 1996; van Hoof, 1999; Yoder, 2000). Research supports this: namely, although gender differences between the four statuses have seldom been recorded (Kroger, 1997), identity formation in general and the statuses in particular seem to be associated with structural background factors, as Fadjukoff (2007) and Côté (1997) have shown. For instance, macro factors such as economic upheavals tend to influence status distributions, increasing diffusion (Fadjukoff, Kokko, & Pulkkinen, 2010). In other words, identity is not a normative and universal outcome, and should not be studied as such. Personal identity does not develop unitarily among individuals from different backgrounds and contexts but is rather, as Erikson described (1968, 24, 73), a dynamic and continuous process without a fixed end-point. Fadjukoff (2007) as well as Carlsson, Wängqvist and Frisén (2015) have shown that identity continues developing far beyond adolescence. In fact, Stephen, Fraser and Marcia (1992) have also acknowledged the occurrence of successive commitment-exploration cycles (so called MAMA-cycles; moratorium-achievement-moratorium-achievement).

1.1.5 Multidimensional process models of identity

Responding to some of the shortcomings of Marcia's identity status model several authors made attempts to improve the model by either extending or expanding different aspects of it (see S. J. Schwartz, 2001 for a discussion). For instance, building on suggestion made by Grotevant (1987), Meeus Iedema and Maassen (2002) distinguished between two different aspects of exploration: the exploration of different identity alternatives (equivalent to Marcia's dimension) and the continuous evaluation of already established commitments. Similarly, building

on ideas about different degrees of commitment proposed by Bosma (1985), Grotevant (1987) suggested that the presence of commitments in general (equivalent to Marcia's dimension) should be distinguished from identification with them. These theoretical distinctions led eventually to the development of two different kinds of process models of identity; these are argued to capture Erikson's original notion of identity as both a continuous and reiterative process better than Marcia's model (Crocetti, Rubini, & Meeus, 2008; Luyckx, Goossens, Soenens, & Beyers, 2006).

1.1.6   The Dimensions of Identity Development Scale

The present research builds on the so called dual-cycle model of identity, introduced by Luyckx et al. (2005; 2006). According to the model, identity formation depends on two continuous and dynamic loops – identity formation and identity evaluation. Identity formation involves two processes: exploring different future identity options (labelled *exploration in breadth*) and making choices regarding these (*commitment making*). Identity evaluation, likewise, involves two processes: reflecting on and evaluating already established commitments (*exploration in depth*) and emotionally identifying with them (*identification with commitment*). In other words, while future options are explored and some commitments made, the continuous evaluation of these commitments determines whether they are discarded or more strongly identified with. In the former case, the process starts all over again. In the latter case, even longstanding and stable commitments may over time turn out to be less appealing or purposeful due to changing life situations, once again restarting the exploration process. The dual-cycle model was later supplemented with a fifth process (*ruminative exploration*) to distinguish between adaptive and dysfunctional types of exploration (Luyckx et al., 2008). This followed from findings that exploration was ambivalently associated with both positive and negative psychosocial outcomes. Luyckx and colleagues (2008) hypothesised that besides experiencing exploration as a positive process necessary for achieving stable commitments, in late modern environments of seemingly endless alternatives, individuals may get mired in perpetual and anxious brooding or rumination over alternatives, thwarting their decision making (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). They also hypothesised that ruminative exploration could help detect new statuses. Overall, identity uncertainty and diffusion has been theorised to be on the increase in contemporary societies for the reasons already mentioned, although findings remain inconclusive (e.g., Born, 2007; Marcia, 1989; van Hoof, 1999).

To assess the five identity processes, Luyckx et al. (2008) developed the *Dimensions of Identity Development Scale* (DIDS). The instrument consists of 25 items on five dimensions that measure commitment and exploration in different identity domains (see Luyckx, Seiffge-Krenke, Schwartz, Crocetti, & Klimstra, 2014 for relationships and career), in the present instance the domain of general future plans. Although "general future plans" may appear ambiguous, Luyckx et al. (2008) argued that planning for and making choices about one's future is the cru-

cial task for adolescents and young adults (cf. Nurmi, 1991). Having or not having future plans is indicative of direction and meaning, and thus comes close to Erikson's original idea, that is, identity as a sense of a present with an expected future. The DIDS was subsequently reduced to a short 11-item version by Marttinen, Dietrich and Salmela-Aro (2016).

The DIDS allows both a variable- and person-oriented approach (Crocetti & Meeus, 2015). That is, the dimensions may be used independently to examine their relations with such external variables as well-being (e.g., Luyckx, Klimstra, Duriez, Schwartz, & Vanhalst, 2012). Alternatively, Cluster Analysis (CA) or Latent Profile Analysis (LPA) is employed to assess configurations across the dimensions and assign identity status labels based on the unique patterns they form (see Figure 1 for example). The y-axis represents z scores (i.e., standard deviations) which are interpreted as effect sizes. As with Cohen's d (1988), a SD of 0.2 is regarded as a small effect, a SD of .5 as a moderate effect, and a SD of 0.8 as a large effect. The formation of statuses is followed by an evaluation of their associations with external variables. A clear advantage of using CA or LPA in identity status classifications compared to previous methods based on median split procedures is that far more statistical power is retained (i.e., variance) and artificial dichotomies are avoided (Luyckx et al., 2008). A further issue, although in recent research the *status* concept has regularly been displaced by identity *cluster* or *profile*, denoting the method used to derive the groups, henceforth these three are used synonymously.
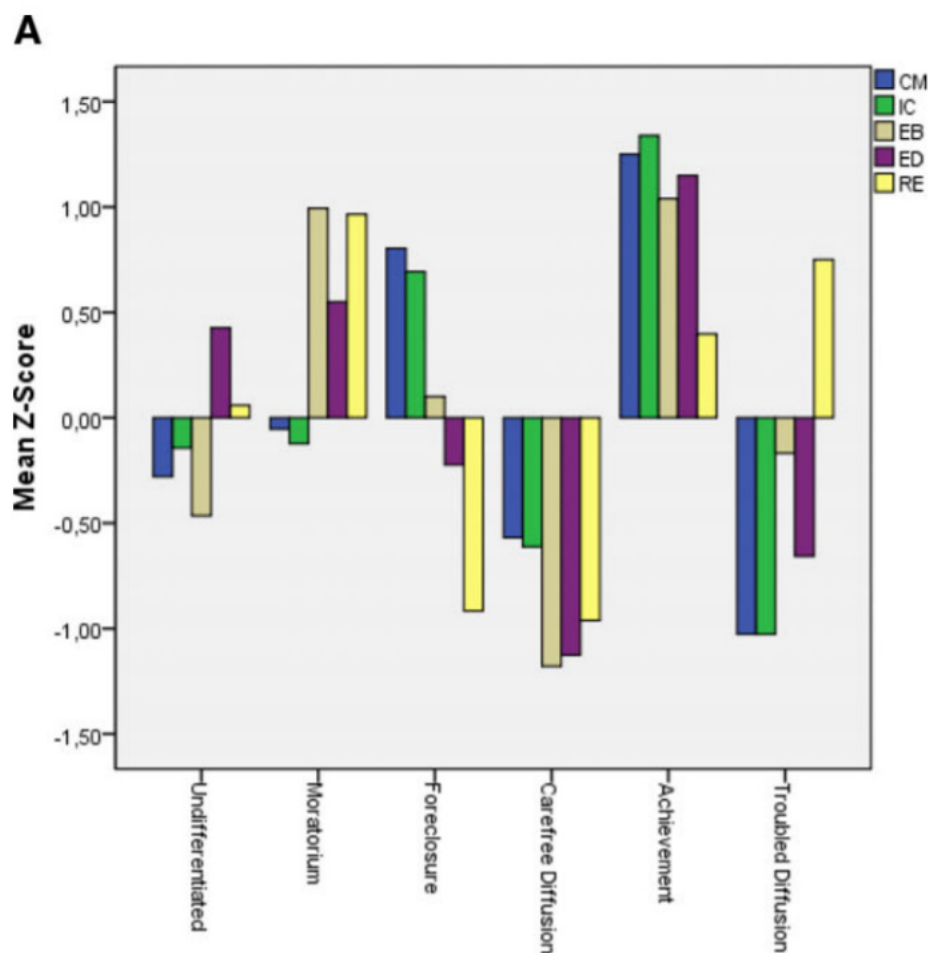
FIGURE 1   Examples of identity status configurations. CM=commitment making,
            IC=identification with commitment, EB=exploration in breadth, ED=explora-
            tion in depth, RE=ruminative exploration (Cicognani, Klimstra, & Goossens,
            2014).

To date, the DIDS has generated consistent results among Italian, Belgian-Dutch,
German, Filipino, American, Georgian, Turkish, Swiss and French adolescents
(Crocetti, Luyckx, Scrignaro, & Sica, 2011; Luyckx, Soenens, Goossens, Beckx, &
Wouters, 2008; Luyckx, Duriez, Klimstra, & De Witte, 2010; Luyckx et al., 2014;
Pesigan, Luyckx, & Alampay, 2014; S. J. Schwartz et al., 2011; Skhirtladze, Ja-
vakhishvili, Schwartz, Beyers, & Luyckx, 2016; Umit Morsunbul & Figen Cok,
2014; Zimmerman, Lannegrand-Willems, Safont-Mottay, & Cannard, 2013). The
identity dimensions have shown significant associations with psychosocial cor-
relates such as well-being, risk behaviour, work engagement and perfectionism
(Luyckx et al., 2008; Luyckx et al., 2008; Luyckx et al., 2010; S. J. Schwartz et al.,
2011). Further, in line with theory (Grotevant, 1987), identification with commit-
ment has been found to be more important for psychological well-being than
mere commitment (e.g. Luyckx et al., 2006). That is, a given commitment does

not contribute to a firm sense of identity until it has been evaluated and confidently integrated into the self. Moreover, while the adaptive exploration processes have been positively or non-related to well-being, ruminative exploration has consistently shown strong negative associations (Crocetti et al., 2011; S. J. Schwartz et al., 2011). In three recent studies, however, Zimmerman et al. (2013), Beyers and Luyckx (2016) and Skhirtladze et al. (2016) found that the DIDS consisted of six instead of five dimensions. Exploration in depth could be divided into a reflective side, positively associated with commitments, and another side of reconsideration, negatively associated with commitments. Thus, as could be expected, deeper evaluation of present commitments does not necessarily lead to stronger commitments but may instead lead to their rejection and a search for new ones. The research teams called for more in-depth studies on the different aspects of exploration.

Similarly, the DIDS has consistently produced a set of 5-6 different identity status clusters or profiles, four of which resemble Marcia's original statuses (e.g., Crocetti et al., 2011; Luyckx et al., 2014; S. J. Schwartz et al., 2011; Zimmerman et al., 2013): achievement (high scores on all dimensions except ruminative exploration, which is scored low), foreclosure (moderately high scores on both commitment dimensions but low scores on all the exploration dimensions), moratorium (sometimes labelled ruminative moratorium: low scores on both commitment dimensions but high scores on all the exploration dimensions) and diffusion (low scores on all dimensions except ruminative exploration, which is scored high). Intriguingly, as hypothesised, the DIDS has also detected new statuses such as *searching moratorium* (moderately high scores on all dimensions, see Crocetti et al., 2008; however, Marttinen et al., 2016 labelled this reconsidering achievement; S. J. Schwartz et al., 2011), *carefree diffusion* (low scores on all dimensions) and *undifferentiated* (intermediate scores on all dimensions) (Luyckx et al., 2008). Individuals with intermediate scores on all dimensions have alternatively been labelled *early closure*, indicating the presence of cautious or erratic exploration and uncertain commitments (Meeus et al., 2010). Further, since the introduction of carefree diffusion, the old diffusion status has been relabelled either *diffused* or *troubled* diffusion (S. J. Schwartz et al., 2011; S. J. Schwartz et al., 2015). Interestingly, carefree diffusion has been theorised to consist of individuals who show adaptation to the demands of endless flexibility posed by the current labour and consumer markets (Born, 2007; see also Gergen, 1991). These persons are relatively content because they have given up on the objective of attaining certainty and predictability. Instead, they achieve control by applying an all-options-open strategy and avoiding strong commitments.

Waterman (2015) has criticised the DIDS on the grounds that it lacks a measure for past exploration. For instance, according to the traditional identity status theory, a person who has already explored, decided on future plans and is no longer exploring should be categorised as achievement. The DIDS, however, lacking a dimension for past exploration, assigns this person to the foreclosure status as it builds on the assumption that continuous exploration (in breadth) is adaptive and part of an achieved identity. Waterman suggested the development

of an eight-dimensional identity measure consisting of identity processes from the DIDS and other process models, including a dimension for past exploration.

Finally, similar to the identity dimensions, the identity statuses have also been differentially related to, among others, psychological functioning and risk behaviour (Luyckx et al., 2010; e.g. S. J. Schwartz et al., 2011), work-stress and satisfaction and family-work conflict (Luyckx et al., 2014), and sense of community and loneliness (Cicognani et al., 2014). As expected, subjects in the high commitment statuses have generally been the best off and the diffused the worst off in all outcomes. Contrary to expectations, however, Schwartz et al. (2011) found carefree diffused individuals to comprise a risk group characterised by health risk behaviours (e.g., aggression, unsafe sex, risky driving, illicit drug use, etc.). All in all, findings suggest that the presence of firm commitments, that is, a sense of personal identity, is strongly linked with wellbeing and should be supported. In other words, identity formation is not a marginal or individual issue but a societal one related to national economy and health, concerning the marginalisation of youth and collective prosperity.

1.1.7 Unchartered territory with identity process models

Despite the shift in theory and research towards viewing personal identity as a context-dependent life-long process and the introduction of measures such as the DIDS, research has remained strongly fixed on adolescence as the time of identity formation. Arnett (2014) notes that apart from a few narrative studies (e.g., Carlsson et al., 2015; McAdams, Josselson, & Lieblich, 2001), and, I would add, Fadjukoff's (2007) longitudinal study of adults, 60 years of research has not only mapped identity development beyond adolescence surprisingly poorly but has also been unable to provide conclusive evidence for identity formation as a normative and exclusive crisis of adolescence. Moreover, hardly any studies exist on identity processes as outcomes of background factors, that is, the dynamics of identity formation. For instance, aside from a few studies on the relationships between identity and success in subsequent crises such as intimacy and generativity (Beyers & Seiffge-Krenke, 2010; Mannerström, Lönnqvist, & Leikas, 2017; Markstrom & Kalmanir, 2001; Pancer, Pratt, Hunsberger, & Alisat, 2007), hardly any research exists on identity formation and the tasks preceding it, such as industry (Marcia, 2014). Given that western societies have moved into the digital age and hence require new competencies from its members to thrive in society, it would for educational purposes be of the utmost importance to study if, and if so how, digital engagement is linked to a sense of identity. Yet little knowledge has been accumulated on how identity processes and statuses appear in young adulthood or, for that matter, on how they develop and interact with social circumstances and the key transitions of that stage of life.

A related issue in previous identity research in general, and status research in particular, has been that convenience samples have been the norm. In other words, background variables influencing differences in opportunities between individuals have regularly been overlooked or downplayed in research (see

Yoder, 2000 for a discussion). As a rule, highly privileged white-middle-class university or college students have represented all adolescents worldwide (e.g., Slugoski & Ginsburg, 1989). Relatedly, barely any research has been published on the links between socio-economic circumstances and identity processes and statuses (see Côté, 1997 for a test of identity capital).

In addition, research on identity and psychosocial correlates employing process models such as the DIDS, in a longitudinal setting and specifically among Finnish adolescents and young adults, remains scarce (see Marttinen et al., 2016 for an exception). This is somewhat surprising, since from a comparative perspective there are reasons for suspecting that Finland, along with its Nordic peers, provides a unique context for identity formation, as it differs in important societal respects from its central-European, American and Asian counterparts. While in many respects (e.g., democracy, individual rights, consumer capitalism), Finland's social and economic environment resembles that of other western countries, the relatively extensive state-provided social benefits and security networks that Nordic citizens enjoy (Sapir, 2006) may influence their identity exploration and commitments in ways not registered elsewhere. For instance, young people gain social and economic independence from their families and social structures relatively early due to financial support from the state (e.g. study grants, housing benefits). This prompts the hypothesis that Finns are free to pursue more open-ended and flexible identities for longer periods of time and more securely than is possible elsewhere.

Hence, we know little about the current situation and distribution of identity statuses among Finns in their late twenties, nor do we know, taking the Finnish cultural context into account, how carefree diffused individuals fare in terms of psychological well-being. Further, we know little about how identity processes are related to digital engagement and related skills assumed essential for positive identity development in contemporary society. Finally, we know little about how identity processes develop and interact with the developmental tasks (cf. transitions) expected in young adulthood. The present research is an attempt to contribute to filling these gaps in the literature.

1.2 Developmental tasks of young adulthood and their postponement

Although Erikson (1950; 1968) perceived identity as a lifelong process, he also, in observing the United States of the 1950s, concluded that questions of identity are most pertinent in adolescence and resolved by most individuals around age 20. Much has changed since, however. Deciding on one's future seems a more precarious task today than ever before and identity questions tend to go unresolved well into adulthood, a phenomenon commonly referred nowadays to as the prolongation of youth (Côté, 2000). The term mass society has been replaced by post-

modernity or late modernity yet the same concerns persist (Gergen, 1991; Giddens, 1991). The psychological and social landscape in which identity choices need to be made is increasingly uncertain, unpredictable and instable. In this section, I will introduce the sociological life-course theory on developmental tasks or transitions, their postponement both globally and in Finland and present their assumed links with new identity issues.

In contemporary life-course sociology, developmental tasks are viewed not from a predetermined, epigenetic perspective but as culturally and historically set, age-related transitions that are expected of the majority of people in society (Elder & Giele, 2009). While individuals construct their own lives and make decisions, the meaning and impact of these events and roles enacted over time are contingent on social relationships and circumstances. In contrast to the Eriksonian life span theory, then, life-course sociology maintains that transitions or tasks do not necessarily follow a given sequence. Instead they constitute the sum of a person's experience over the life course. Moreover, this experience is not uniform and universal for individuals but instead varies significantly across time and place (Giele & Elder, 1998, 22).

The completion of developmental tasks signals compliance with social norms. Simultaneously, they form goalposts on a path of social integration and happiness, providing the individual with meaning, a sense of current position on the life track and a future horizon. A wealth of research has shown that the completion of developmental tasks is associated with high well-being and life satisfaction, as compared to still being in the process of attaining them (e.g., Howard, Galambos, & Krahn, 2010; Schoon, Chen, Kneale, & Jager, 2012; Schulenberg, Sameroff, & Cicchetti, 2004). Furthermore, the completion of developmental tasks is linked to an increase in conscientiousness, whereas non-normative life choices are linked to an increase in neuroticism (Leikas & Salmela-Aro, 2015).

Key tasks traditionally considered marking the transition from adolescence to adulthood have been (1) leaving the parental home (i.e., independent living), (2) finishing formal education, (3) entering working life (i.e., educational attainment and work status), (4) forming a romantic relationship and (5) becoming a parent (Elder & Shanahan, 2007). Some 50 years ago these transitions were completed in many western countries in young adulthood, at the latest between ages 20 and 25. Abundant demographical evidence, however, shows a significant postponement in these transitions over the past few decades (Arnett, 2000; Arnett, 2006; Côté, 2000; Žukauskienė, 2015). That is, young adults live with their parents for much longer and finish formal education, enter working life, get married and become parents much later than before. What is remarkable about this trend is not just that these transitions are completed later, between ages 25 and 35, but rather that they have become much more gradual, de-standardised and individualised than in the past (Brückner & Mayer, 2005; Buchmann & Kriesi, 2011). Contemporary young adults enact these tasks later, at their own pace and with greater hesitation than previous generations. An increasing number "cancel" and/or rework their transitions by, for instance, leaving working life or their

spouse for a new education or partner, while others ignore romantic relationships and parenthood altogether. In other words, the traditional markers of adulthood and their meaning for social integration have shifted and become blurred.

Arnett (2000; 2006) coined the term *emerging adulthood* to mark what was perceived as a new developmental phase of extended and intensified identity exploration occurring roughly between ages 18 and 25, that is, between adolescence and young adulthood. Emerging adulthood is characterised not only by a sense of independence, responsibility and awareness of the multitude of opportunities provided by adulthood but also by the absence of the pressing social and economic commitments and duties associated with adolescence and dependence on parents. That is, traditional developmental tasks are partly delayed because today's emerging adults have the freedom, opportunity and desire to explore themselves and their possible future selves by first accumulating a myriad of experiences – meeting new people and travelling the world – before making decisions about long-term commitments. Traditional commitments continue to be aspired to but are not established without first gaining a sense of certainty and autonomy (Mary, 2012).

Whereas Arnett regarded this mainly as a positive phase, increasing the likelihood of informed decisions and firm commitments, others like Côté (2000; 2006c) have questioned the existence of a separate developmental phase and instead referred to it as a *prolongation of youth*. For Côté, the postponement of developmental tasks is indicative of an involuntary, aggravated and extended identity crisis. Due to the so called individualisation process, contemporary societies demand a level of individual agency and psychological functioning not required in previous, premodern and modern societies (Bauman, 2001; Beck & Beck-Gernsheim, 2002). That is, individuals today are expected to reflect, freely choose and commit to a certain life path without any normative guidance or certainty of optimal or desired results (Bauman, 2007; Giddens, 1991). Barry Schwartz (2000) speaks of a "tyranny of freedom", by which he refers to the anxiety that is related with seemingly endless options and their ambiguous outcomes. For instance, the development of global markets has produced a highly precarious labour market, one that is difficult to predict and control at the level of the nation state, let alone for individuals (Côté, 2014; Sennett, 2006). At the same time, according to the theory of the *new individualism*, "quarterly" capitalism pushes for "short-termness", instant changes, speed and constant *re-invention* on all levels of society (Elliott & Lemert, 2009; Elliott, 2015). To stand out, to confirm one's uniqueness and individuality, people today are obsessed with perpetually shaping their identities, bodies, social relationships and organisations. The goal is no longer to achieve a stable position or character because change itself has become an intrinsic value. The prototype individual of the neo-liberal economies of the west is the self-made entrepreneur, eternally competing against and threatened by others in terms of visibility and success (Scharff, 2016).

The emotional costs of this development are heavy. Because traditional developmental tasks have lost their transitional character and merely become "bureaucratised opportunities created by others" (Côté, 2006b), the underpinnings of secure, agentic and existential progress and maturation in one's life are lost. Losing its underlying logic, identity exploration becomes empty, ruminative and endless. That is, identity exploration no longer has a clear goal beyond exploration itself. Keeping identity options and commitments open and fluid is a way of consolidating individuality and freedom. Because traditional goalposts of progress and development have lost their meaning and there is nothing solid left to strive for, "transitions" become temporary and instable (Furlong & Cartmel, 1997; Furlong, Woodman, & Wyn, 2011). Nowadays not just young adults but also adults struggle with perpetual doubt and uncertainty regarding their commitments. Hence, the mental demands of individuality in the absence of certainty and any normative guidance becomes a burden for many (Kegan, 1995). To conclude, developmental tasks are postponed not only because individuals voluntarily choose to do so but also because structural constraints discourage firm commitments, thereby rendering choices and their outcomes difficult to manage. Côté (2006c) notes that the risk with this development is a default individualisation, that is, youth are increasingly left drifting around without any permanent commitments and the skills to succeed. He depicts choice-making as one of the most important competencies in contemporary societies. Young adults must be educated in choice-making for them to have factual and equal opportunities to thrive in society, what he terms developmental individualisation.

A glance at national statistics suggest that Finnish youth have followed or even surpassed their western peers when it comes to the age at which conventional transitions are made (Arnett, 2006). For instance, Finns graduate from tertiary education at age 27, get married at age 32 and women bear their first child at age 29, all of which are slightly later or above the OECD average (OECD, 2016b; 2016c; 2017; Official Statistics of Finland, 2016a). Finland also differs from many other European countries in other respects. Finnish young people, along their Nordic peers, move out of their childhood home at around age 21, which is much earlier than elsewhere in Europe (average 26: Eurostat, 2017). Further, it is common practice for Finnish youth to take a year or more off after high school to travel or work (plus compulsory military service for young men), before entering tertiary education at around age 24, which is also much later than the OECD average (OECD, 2017; Parker, Thoemmes, Duineveld, & Salmela-Aro, 2015). Similarly, one-third of Finnish young people aged 20-29 choose cohabitation instead of marriage, considerably more than in the other OECD countries (Eurostat, 2015; OECD, 2016a).

As mentioned in the previous section, there are reasons for suspecting that the Finnish welfare system provides a unique context for identity formation. On the one hand, the welfare system allows its citizens to pursue more open-ended and flexible identities than elsewhere. On the other, despite, or perhaps because of, these benefits a substantial proportion of Finnish students work alongside their studies, not only to improve their economic situation and gain experiences

of adult life but to improve their future position in a precarious labour market. From the global economic recession that began in 2008 onwards Finns have also faced unstable and unpredictable labour markets. Although the Finnish youth unemployment rate is currently around the EU average, temporary contracts are somewhat more prevalent than elsewhere (Eurostat, 2017). In recent national surveys, Finnish youth have indicated their own livelihood and future as far bigger personal concerns than health, loneliness or criminality (Myllyniemi, 2017; Official Statistics of Finland, 2013). Jobs concomitant with one's level of education are considered more difficult to attain than before. Mary (2012) argued that in Finland the study-to-work transition has been completely replaced by a study-and-work transition. In other words, young adults are both discouraged and even prevented from establishing firm commitments.

To sum up, Finnish young adults continue to complete conventional transitions, although over a longer period. To bridge the gaps in previous research, the main questions to be addressed in this dissertation were, how do identity processes (i.e., exploration of and commitment in future plans) develop during young adulthood? How are they moderated by conventional developmental transitions? And how is success in developmental tasks associated with changes in identity processes?

1.3 Digital engagement

The social and economic transformations of recent decades have undoubtedly introduced new uncertainties and challenges regarding decision-making and stable commitments. However, late modern adolescents and young adults also have new tools and related competencies at their disposal to manage increasing contingency. Recall that for Erikson (1950; 1968), identity formation is dynamically linked with other life tasks such as gaining a sense of industry, that is, becoming skilled and competent in the core technologies of work and communication in one's culture. Alongside reading and writing, digital competence could be considered the most essential skill for success as an autonomous and productive participant in contemporary society.

More specifically, we are, according to some, currently living through the fourth industrial revolution (Schwab, 2017). During the last 20 years, Information and Communication Technology (ICT), the Internet and social media have profoundly transformed how we live, communicate and learn. Globally connected digital tools offer easy access to and constant interaction with other people and information. More specifically, this means new ways of working, creating, sharing experiences, creating solidarities, doing business, shopping, entertaining ourselves and engaging politically (Curran, Fenton, & Freedman, 2016; Schwab, 2017). Our networked minds are creating new meaning at unprecedented speed (Castells, 2015). Hence, social interaction is increasingly digitally mediated. At the same time, social networking, knowledge search and sharing, mastering computer programs for creating, designing or programming artefacts develop digital

literacy (cf. digital capital), considered currently as the fundamental skill required by future labour markets and overall social integration in the 21st century knowledge society (Gallardo-Echenique, de Oliveira, Marqués-Molias, & Esteve-Mon, 2015; Trilling & Fadel, 2009). In the present research, *digital engagement* was used as an umbrella term for the diverse digital practices and competencies presented below.

Indeed, by now we know that digital engagement is not a passive activity but instead one that deeply impacts on social and cognitive development (Ito et al., 2009; Manago, 2015). For instance, social networking and gaming are associated with both positive and negative social psychological outcomes (e.g., Greitemeyer & Mügge, 2014; Przybylski, 2014; Przybylski & Weinstein, 2017). Digital engagement at once reflects and shapes ways of communication and learning, meaning that more advanced engagement suggests more developed and complex knowledge practices (Hakkarainen, 2009). Put differently, digital engagement mediates coping skills and social functioning in life, thereby occupying a meaningful role for development in adolescence and young adulthood.

Despite the importance and creative potential of ICT for adolescents' self-development and future employment opportunities, technology-mediated activities are not practised on the same level across populations (Bennett & Maton, 2010; Margaryan, Littlejohn, & Vojt, 2011). For instance, several studies have found that the majority of American teenagers engage mostly in social networking and entertainment; that is, their digital activities are primarily *friendship-driven*. Only a small minority mostly use ICT for more creative and demanding tasks, that is, are *interest-driven* (Eynon & Malmberg, 2011; Ito et al., 2009; Kennedy, Judd, Dalgarno, & Waycott, 2010; van den Beemt, Akkerman, & Simons, 2011). This is an increasingly worrying issue as digital engagement is bound up with structural inequalities across gender, ethnicity and social class. Adolescents from wealthier backgrounds typically have better access to ICT and use the internet more for interest-driven activities than others, and therefore also have more advanced digital competence (Heinz, 2016; Robinson et al., 2015). In other words, the danger exists that early digital divides may deepen social and economic divides instead of reducing them. The current research focus has shifted towards investigating what outcomes different forms of socio-digital participation have and for whom (Ragnedda, 2016).

Already at the dawn of the internet age, Gergen (1991) speculated that ICT would introduce unprecedented opportunities for and challenges to identity formation. For instance, he hypothesised that the exponentially multiplying social interactions between people across different situations and cultures and the explosion in knowledge exchange would expand our notions of ourselves and the world and break down earlier power constellations in society. Indeed, recent research has found that social networking, gaming and online communities coupled with endless data sources may support identity formation. In line with theories on neo-tribes (Bauman, 2007; Maffesoli, 1996), they may offer a sense of belonging, promote self-concept clarity and agency as well as expand possibilities

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to explore, reflect and decide on different education and career alternatives (Gonzales & Hancock, 2008; Manago, 2015; Tynes, Garcia, Giang, & Coleman, 2011). Besides being a sounding board of self-reflection, digital engagement develops competence (cf. digital literacy) that in itself offers career paths in 21st century working environments (Gallardo-Echenique et al., 2015; Trilling & Fadel, 2009)

At the same time, however, Gergen (1991) hypothesised that increasing, swift contacts with other people and the disintegration of information would create cacophony and superficiality, fragmenting the self and blocking any stable identity formation. Indeed, here too, research has showed that the intensive strategic self-presentation typical of engagement with social networking sites is associated with cognitive overload (e.g., Misra & Stokols, 2012). Further, a pre-occupation with attractiveness and social evaluation may lead to shallow relations with others and also dissatisfaction with the self, thereby delimiting autonomy and undermining identity (Gentile, Twenge, Freeman, & Campbell, 2012; Haferkamp & Krämer, 2011). Gaming, in turn, may turn into a form of escapism, a substitute for real world social contacts and avoidance of pressing identity decisions (Kardefelt-Winther, 2014). Addictive or excessive behaviours related specifically to online gaming have become so common that they are now termed and studied as Internet gaming disorder (Lopez-Fernandez, Kuss, Pontes, & Griffiths, 2016).

All in all, theory and empirical research suggest that the digital world works as an extension of the self, a tool to enhance one's capacity to explore, commit to and achieve important future goals (Belk, 2013). Akin to reading and writing, then, learning online communication, knowledge sharing, programming and media creation develop digital literacy which in turn shapes one's preferences and choices – that is, identity – in the present and for the future. Gaming skills and communities may also support positive identity development by offering work career paths and social contacts. On the other hand, new forms of digital media use and interaction may also confound identity formation. Seemingly endless options may increase uncertainty, lead to addictive or excessive ICT use and postpone necessary decisions. Thus, because digital skills and practices are not uniform among adolescents, supporting positive and equal digital engagement among youth has become a pressing societal issue.

To conclude, in response to the new demands of 21st century knowledge societies and the concerns related to digital inequalities, the Finnish government and authorities have recently invested heavily in integrating digital technology in education, with the aim of securing high and equal digital competence for all students (City of Helsinki, 2016; Ministry of Education and Culture, 2016; Niemi, Kynäslahti, & Vahtivuori-Hänninen, 2013; Niemi et al., 2014). Finnish adolescents currently rank among the best in Europe in internet activity and skills, and they receive the most parental support for their online activities (Helsper & Van Deursen, 2015; Livingstone, Mascheroni, Dreier, Chaudron, & Lagae, 2015; Sonck, Kuiper, & de Haan, 2012). Given that identity formation is interlinked with general technological skills and that western societies have moved into the digital

age, and hence new competencies are required for thriving in society, it is of utmost importance, for instance, for educational purposes to study if, and if so how, digital engagement is linked with a sense of identity. Previous studies have primarily researched digital engagement and identity on an abstract theoretical level or qualitatively with small samples (see Manago, 2015 for a broad presentation). If and if so, how digital engagement, as in digital skills, gaming seriousness, type of internet activity and excessive ICT use, is related with identity statuses among Finnish adolescents remains an open question. In other words, can good digital skills form the basis for and/or help young people explore possible future plans, and vice versa?

1.4 Aims of the research

Identity formation appears to be a prolonged and more challenging task in contemporary society than previously. Yet, as demonstrated above, identity research targeting large samples and using process-models of identity formation have largely neglected this development and left many important aspects understudied. Hence, the aim of this research was to examine the links between personal identity formation among Finnish adolescents and young adults and relevant correlates in the digital, late modern era. To achieve this objective, the present research employed a five-dimensional identity measure of exploration and commitment processes (the DIDS) to form identity statuses and inspect their associations with subjective well-being, financial standing and digital engagement. Moreover, because the sense of identity was hypothesised to interact with changes in social and economic circumstances, the dynamic interplay of identity processes and life situation in young adulthood was also investigated.

Study 1: *Identity status among young adults: Validation of the Dimensions of Identity Development Scale (DIDS) in a Finnish sample*

Study 1 aimed to detect identity status clusters and validate them via their associations with the subjective well-being variables. The study also focused on the associations of the identity statuses with economic wealth and the relative distribution of the statuses from a cultural-contextual perspective.

Research question 1: What identity status clusters are found when employing the Finnish version of the DIDS (25 items)?

Hypothesis 1.1: It was expected that the five-factor structure of the full 25-item DIDS (e.g., Luyckx et al., 2008; S. J. Schwartz et al., 2011) would also be validated in this Finnish sample.

Hypothesis 1.2: It was expected that similar statuses reported in the literature would be found, including achievement, foreclosure, (searching) moratorium, troubled and carefree diffusion, and undifferentiated (S. J. Schwartz et al., 2011).

Hypothesis 1.3: It was expected that participants with high commitment statuses (i.e., achievement and foreclosure) would come from wealthy backgrounds, have the highest incomes and display the highest subjective well-being (Luyckx et al., 2008). In turn, troubled, diffused individuals were expected to be located at the other end of the continuum and carefree diffused individuals to fall somewhere in between.

Hypothesis 1.4: It was expected that a majority of the participants would be diffused or at least uncertain about their future plans (categorised, for instance, as having a ruminative or searching moratorium status).

Study 2: *Identity profiles and digital engagement among Finnish high school students*

Study 2 examined if, and if so, how identity statuses are associated with digital engagement among adolescents, while controlling for gender, parental SES and life satisfaction.

Research question 2: How is digital engagement, operationalised as digital skills, gaming seriousness, type of internet activity and excessive ICT use, associated with the different identity statuses?

Hypothesis 2.1: It was expected that individuals with commitments (foreclosure, and searching moratorium, but achievement in particular) would show the highest friendship- and interest-driven internet activity, least preference for gaming, most advanced digital skills and least excessive use of ICT.

Hypothesis 2.2: It was expected that individuals with the moratorium status would display intermediate levels of internet activity and digital skills but score the highest on gaming and excessive use of ICT.

Hypothesis 2.3: It was expected that diffused individuals would be the least engaged in internet activities and have the weakest digital skills but would show intermediate levels of gaming and excessive use of ICT.

Study 3: *Associations between identity processes and success in develop-mental tasks during the transition from emerging to young adult-hood*

Study 3 examined identity processes of the DIDS and their interaction with transitional events in a longitudinal setting between ages 24 and 29.

Research question 3: How do identity processes evolve between two time points and are they/how are they moderated by success in the key developmental tasks of young adulthood (i.e., independent living, cohabitation/marriage, achieving education-related full-time employment, becoming a parent)?

Hypothesis 3.1.1: It was expected that commitment processes would decrease or remain levelled between the two measuring points.

Hypothesis 3.1.2: It was expected that adaptive exploration processes would decrease over time.

Hypothesis 3.1.3: It was expected that ruminative exploration would decrease or remain levelled between ages 24 and 29.

Hypothesis 3.2.1: It was expected that having completed a transition already before age 24 and maintaining it throughout the study or, alternatively, completing one during the study would strengthen commitment processes and weaken exploration processes. In contrast, not having completed a task or reverting in one during the study would weaken commitments and strengthen exploration, especially ruminative exploration.

Hypothesis 3.2.2: It was expected that achieving a job during the study would show the strongest moderator effect, followed by parenthood, cohabitation/marriage and independent living.

Hypothesis 3.2.3: No gender differences were expected.

Hypothesis 3.3: It was expected that achieving a job would be the strongest predictor of changes in identity processes between the measuring points, that is, changes towards stronger commitments and weaker exploration, followed by parenthood, cohabitation and independent living.

2 METHOD

2.1 Samples, participants

This dissertation research examined three different samples of adolescents and young adults. All the data were drawn from ongoing or completed longitudinal studies. However, whereas Studies 1 and 2 used cross-sectional data, Study 3 employed a longitudinal design with two measurement points. Study 1 and the questionnaire used in the study were planned by the present author while the data collection was implemented by an independent private sector company. The present author played no part in the setting up and gathering of the data used in Studies 2 and 3.

Study 1 investigated 751 (60.3% women) young adults, who participated in an online study on political engagement and psychosocial correlates conducted by the survey company Norstat. The age range was 18-29 (M = 24.6 ; SD = 3.2) and was thus representative of emerging adulthood, which is typically perceived as covering the ages 18-25, and young adulthood, which includes ages up to 29 (e.g., Arnett & Tanner, 2016; Žukauskienė, 2015). Occupationally, most participants were primarily either studying (40%) or working (39%), with only one in ten being unemployed. Further, in terms of life situation, nine out of ten (91%) reported living in a big city or close to one, every second participant (50%) was either married or cohabiting and nearly one-sixth had children (13%). Every third participant had a post-secondary education. Finally, eight out of ten (80%) had a monthly total household net income below 3 617 euros. All in all, the sample was fairly representative of Finns in this age range (excluding place of residence) despite self-selection bias (Eurostat, 2015; Official Statistics Finland, 2018a; Official Statistics Finland, 2018b).

Study 2 investigated 932 second-year high school students (M_{age} = 17.1 ; SD = 0.29). In Finland, children have 9 years of compulsory comprehensive school, after which they can apply for either general upper secondary (high school; academic track) or vocational upper secondary education (vocational track). During the last few years, roughly half (50%) of all post-comprehensive students entered

high school and a slightly smaller proportion vocational school (42%: Official Statistics of Finland, 2016b). The adolescents in this study were somewhat more privileged and academically successful than the mean. They had a grade point average of 9 (range 4-10; SD = 0.66) which was significantly higher than the academic mean (M = 8.15, SD = 0.40) in the recruitment area, and showed a bias towards higher socio-economic status (SES) in terms of parental occupation (see original study). The sample was part of the MindTheGap study that examined digital engagement and related psychosocial correlates in three cohorts of Finnish adolescents in elementary school, high school and university. The study was conducted with self-report measures at 16 different schools in the Helsinki metropolitan area.

Finally, Study 3 consisted of data from two waves of the Finnish Educational Transitions (FinEdu) study which examined adolescents' and young adults' motivation and well-being trajectories over a period of 13 years after comprehensive school. The sample was considered representative as the study targeted all the adolescents aged 15 and 17 in a mid-sized town in central Finland in 2004. The first measurement used in this research (T1) comprised 1 096 participants (61% women; M_{age} = 24) of whom 854 (i.e. 78% of the T1 sample) continued to T2 (63% women, M_{age} = 29; SD = 1.08). Occupationally, at age 24 (T1) about half of the sample were primarily studying (48%), one-sixth were working (15%) or both studying and working (17%). Only 6% were unemployed. At age 29 (T2), in turn, about half of the sample were primarily working (53%), one-sixth were studying and working (15%) and only one-tenth were primarily studying (8%). The unemployment rate in the sample was 8% and the proportion of parents staying at home with their children had risen from 1% to 11%.

On the issue of research ethics, the sample used in Study 1 was collected and managed by the private company Norstat in line with the general European privacy policy provisions and legal guidelines (Norstat, 2019a; 2019b). The company was responsible for processing all personal information and keeping it safe, and the data delivered to the researcher had been fully anonymised. In contrast, the MindTheGap and FinEdu datasets used in Studies 2 and 3 were collected by two different research teams who also held responsibility for storing and protecting the privacy of all personal information. While the management of the former dataset was approved by the research ethics committee of the University of Helsinki, the latter was managed in accordance with the general guidelines on privacy in effect in 2004 when the longitudinal study was initiated. These two datasets had also been fully anonymised when delivered to the researcher.

2.2 Measures and statistical methods

2.2.1 Variable vs person-oriented research and the statistical methods used

Traditionally, statistical research in psychology has employed the so-called variable-oriented approach (Bauer & Shanahan, 2007). The main objective of this approach is to examine linkages, that is, linear correlations between several variables either in a whole sample or across different predetermined subgroups. In contrast, the more recent person-oriented approach underscores the interactionist and nonlinear character of individual development (Bergman, Magnusson, & El-Khouri, 2003; Magnusson, 2003). Its starting point is in individual differences, meaning that it aims at capturing non-linear effects across different individuals. This is done by capturing regularities, typical combinations and relationships across several key constructs within individuals. However, to reduce complexity in research, individuals are not compared independently as such but instead aggregated into groups representing common and uncommon types of individuals occurring in the sample. The groups are then labelled based on the unique patterns or combinations that the standardised scores form. These groups are then compared in terms of different psychosocial correlates.

Both approaches have their advantages and disadvantages, one approach possibly revealing substantively different results than the other (see Bauer & Shanahan, 2007 for a discussion). For instance, the variable-oriented approach might reveal a positive correlation between two variables in a sample. Observed from the person-oriented perspective, however, it turns out that for certain subtypes of individuals this association is in fact negative or neutral. In general, advocates of the person-oriented approach highlight, for instance, that it does not reduce the data to a single mean value but instead it uncovers meaningful, non-normative subgroups in the sample that can be compared and that can have importance for interventions (Magnusson, 2003). Critics of the person-oriented approach stress, in turn, that significant statistical power is always lost when data are compressed as in dichotomisation (MacCallum, Zhang, Preacher, & Rucker, 2002). In other words, important linkages that have explanatory power and that might exist in the whole sample go unnoticed. Hence, the identified subgroups are oversimplifications and potentially misleading. Further, a practical issue is that the analysis of person-oriented studies demands large samples.

In this research the DIDS was employed both from the variable- and person-oriented vantage points. In the former approach, relationships between the individual dimensions and external variables (e.g., well-being, developmental tasks) were examined with correlation and regression analyses (see e.g., Luyckx et al., 2012). In the latter approach, confirmatory factor analysis (CFA) (T. A. Brown, 2006) was first applied to ensure that the data fitted the hypothesised factor structure of the DIDS, followed by either Cluster Analysis (CA) (Gore, 2000) or Latent Profile Analysis (Muthén & Muthén, 2012) to form groups (i.e., statuses) consisting of different identity configurations (see e.g., Cicognani et al., 2014). LPA is a

model-based modification of CA and is considered by some to be superior to CA because it provides fit indices to guide the selection of the best solution, that is, the optimal number of groups. Following the formation of the statuses, either *Analysis of Variance* (ANOVA), *Analysis of Covariance* (ANCOVA) or *Multivariate Analysis of Covariance* (MANCOVA) were used to compare the main effect of identity status (i.e., comparison of means) on several external variables, while controlling for gender, age etc.

2.2.2 Psychometric instruments of the studies

Study 1

In Study 1, the DIDS was translated into Finnish and the identity dimensions and statuses validated through their associations with several measures of well-being, while controlling for gender and age. In addition, the statuses were compared in terms of economic status.

The original five-dimensional DIDS (25 items, Luyckx et al., 2008) assesses commitment making (e.g. "I have decided on the direction I'm going to follow in my life"), identification with commitment (e.g. "My future plans give me self-confidence"), exploration in breadth ("I think actively about different directions I might take in my life"), exploration in depth ("I think about the future plans I already made") and ruminative exploration ("I worry about what I want to do with my future") in the identity domain of *general future plans*. The response scale ranges from 1 (strongly disagree) to 5 (strongly agree).

In terms of well-being indicators, the cognitive aspect of well-being, that is, satisfaction with life (Diener, Emmons, Larsen, & Griffin, 1985), was measured with the single item Life Satisfaction Scale used in the European Social Survey: "All things considered, how satisfied are you with your life as a whole these days?" The item was scored on a ten-point scale ranging from 0 (not at all satisfied) to 10 (completely satisfied).

In contrast, the more emotional aspect of well-being, that is, happiness, was assessed with the single item used in the World Values Survey: "Taking all things together, how happy are you?". The item was scored on a ten-point scale (the original scale uses a four-point scale), ranging from 0 (not at all happy) to 10 (completely happy).

For the more concrete and short-term, negative aspects of well-being, the Finnish translation (Juntunen, Piiparinen, Honkalampi, Inkinen, & Laitila, 2015) of the 5-item Clinical Outcomes in Routine Evaluation-Outcome Measure was administered (CORE-OM, Evans et al., 2002). The scale probes experienced life functioning and problems/symptoms during the previous week. The items are scored on a scale ranging from 1 (not at all) to 5 (most or all the time). A sample item reads "I have felt despairing or hopeless". The measure is problem-scored (i.e., higher scores indicate more symptoms).

The measures presented above simultaneously capture both inner- and outer-focused evaluations of subjective well-being (Chamberlain, 1988). For instance, judgements of life satisfaction or happiness reflect not only evaluations of

the self, but also of one's life more generally, that is, how content one is with one's work, family, or living environment. Self-esteem, by contrast, referring to a stable sense of personal worth or worthiness (Rosenberg, 1965), is primarily inner-focused. Despite positive associations between self-esteem and both cognitive and emotional aspects of well-being (J. D. Brown & Marshall, 2001; Diener & Diener, 1995), self-esteem is argued to be different from these due to its dependence on judgements of personal competence and achievements (Lönnqvist, Leikas, Mähönen, & Jasinskaja‐Lahti, 2015). In Study 1, self-esteem was assessed with the Single-Item Self-Esteem Scale (SISE) developed and validated by Robin, Hendin, and Trzesniewski (2001). The item reads "I have high self-esteem" and is scored on a ten-point scale, ranging from 0 (not very true of me) to 10 (very true of me).

In contrast, four different aspects of economic status were measured. First, objective income (i.e., total household net income per month) was assessed using a single-item, ten-point scale ranging from 0 (under 1 000 euros) to 10 (over 5 361 euros). Subjective income (i.e., how well the respondent perceives he or she gets by financially), in turn, was assessed using a single-item, four-point scale ranging from 0 (Very hard to get by on current income) to 3 (I live comfortably on current income). Further, childhood family income (i.e., the perceived financial status of one's childhood family) was measured with a single-item, ten-point scale ranging from 0 (poor) to 10 (rich). Finally, expected or estimated worth of inheritance was assessed using a single-item, ten-point scale ranging from 0 (nothing) to 10 (considerable inheritance).

Study 2

In Study 2, identity statuses were compared on their digital engagement, while controlling for gender, SES and well-being. Digital engagement was used as an umbrella term for several different types of digital competencies and practices. Due to restrictions posed by the data, on this occasion the short 11-item version of the DIDS, validated by Marttinen et al. (2016), was employed. The short DIDS consists of two items per dimension except for ruminative exploration, which has three. The measured identity domain was general future plans. It is noteworthy that in the FinEdu data used in Studies 2 and 3 the exploration-in-depth dimension of the short DIDS tapped more into what has elsewhere been termed reconsideration of commitment, a dimension described in more detail below in the results section.

As one part of digital engagement, digital skills were measured using the 9-item scale developed by Hakkarainen et al. (2000) and Hietajärvi, Tuominen-Soini, Hakkarainen, Salmela-Aro, and Lonka (2015). Although the scale measures basic skills separately (e.g., "How competent do you see yourself in editing text documents") and more advanced skills (e.g., "How competent do you see yourself in programming"), a total score was computed for digital skills. The response scale ranges from 1 (not at all) to 5 (very fluent).

Type of internet activity was measured using four subscales from the 24-item Socio-Digital Participation Inventory (SDPi) developed by Hietajärvi, Seppä, and Hakkarainen (2017): social networking (e.g., "I update my 'status' or share

interesting things (pictures/links) with others in social media (Facebook, WhatsApp, Twitter)"), knowledge-oriented (e.g., "I search for new information about my hobbies or things I'm interested in"), media-oriented (e.g., "I share my own creations (text, videos, picture, music) with others") and technology-oriented (e.g., "I create websites for others"). However, based on theory and interpretation, the subscales knowledge, media and technology-oriented were combined to represent a general *interest-driven* digital activities construct, whereas social networking represented *friendship-driven* activities. The SDPi-scale ranges from 1 (never) to 7 (all the time).

Gaming seriousness, in turn, was measured with a six-item scale (e.g., "Gaming is a very important hobby for me") with response options ranging from 1 (completely disagree) to 7 (completely agree).

Further, compulsive and harmful digital technology practices (i.e., excessive ICT use) was assessed with the 5-item scale earlier employed by Salmela-Aro, Upadyaya, Hakkarainen, Lonka, and Alho (2017). The scale uses a response range from 1 (completely disagree) to 5 (completely agree). One sample item reads, "Using ICT causes me to neglect my schoolwork".

Finally, the SES control variable was based on a three-category (i.e., blue-collar, lower white-collar and upper white-collar) adaptation of the classification of socio-economic status groups used by Statistics Finland (1989). Well-being, in turn, was measured with the 5-item Satisfaction with Life Scale (Diener et al., 1985). One such item is "I am satisfied with my life". The response scale ranges from 1 (completely disagree) to 7 (completely agree).

Study 3

In Study 3, the short DIDS (Marttinen et al., 2016) was once again employed (see previous section). This time, however, the focus was on how identity processes develop between two time points (age 24 and 29) and if changes are moderated by the key developmental transitions (or tasks) of young adulthood. Moreover, success in developmental tasks was regressed on the identity dimensions to examine which of these had the greatest impact on changes in identity.

The completion of four developmental transitions was measured at both time points: (1) no longer living with parents (i.e. independent living), (2) cohabitation/marriage, (3) parenthood and (4) attaining an education-related full-time position.

3 RESULTS OF THE ORIGINAL STUDIES

3.1 Study 1

The aim of Study 1 was to 1) validate the factor structure of the Finnish version of the DIDS (Luyckx et al., 2008), 2) examine the distribution of statuses in a (cross-)cultural, Finnish perspective and 3) compare the statuses – with a focus on carefree diffusion – on psychological well-being and economic wealth.

First, and unexpectedly, the CFA did not support the hypothesised five-factor model of the DIDS; instead, six factors suited the data better. That is, the exploration in depth dimension had to be split into a more adaptive aspect – reflective exploration in depth – and a more maladaptive aspect – reconsideration of commitment. This was supported by the internal correlations of all the dimensions. Namely, whereas exploration in breadth and reflective exploration in depth were positively associated with both commitment dimensions, these coefficients were negative for both ruminative exploration and reconsideration of commitment. Further, ruminative exploration and reconsideration of commitment were positively related, while no association was observed between ruminative exploration and reflective exploration in depth. Nonetheless, as expected, both commitment dimensions and exploration in breadth were positively interrelated.

The unpacking of the exploration in depth dimension was further supported by the associations between the identity dimensions and external well-being variables. Namely, the regression analyses showed that whereas reflective exploration in depth was uniquely and positively associated with happiness and life satisfaction, no such connection was found between reconsideration of commitment and well-being. Further, whereas identification with commitment and ruminative exploration were uniquely associated with well-being, the former positively and the latter negatively, exploration in breadth was uniquely and positively linked with well-being except for the happiness and life satisfaction variables. In turn, and as expected, commitment making was not uniquely associated with well-being.

Second, in line with the hypotheses, the CA identified six identity statuses: *achievement* (16.3%), scoring high on both commitment dimensions and reflective exploration in depth, intermediate on exploration in breadth and low on reconsideration of commitment and ruminative exploration; *foreclosure* (12.9%), scoring moderately high on both commitment dimensions and moderately low to low on all the exploration dimensions; *searching moratorium* (24.5%), scoring moderately high to high on all dimensions; *troubled diffusion* (14.1%), scoring very low on both commitment dimensions, intermediate on reflective exploration in depth and high to very high on the other exploration dimensions; *carefree diffusion* 4.7%), scoring intermediate on ruminative exploration and low to very low on the other dimensions; and *moderate carefree diffusion* (27.5%), scoring intermediate to low on all dimensions. Figure 2 shows the cluster configurations.
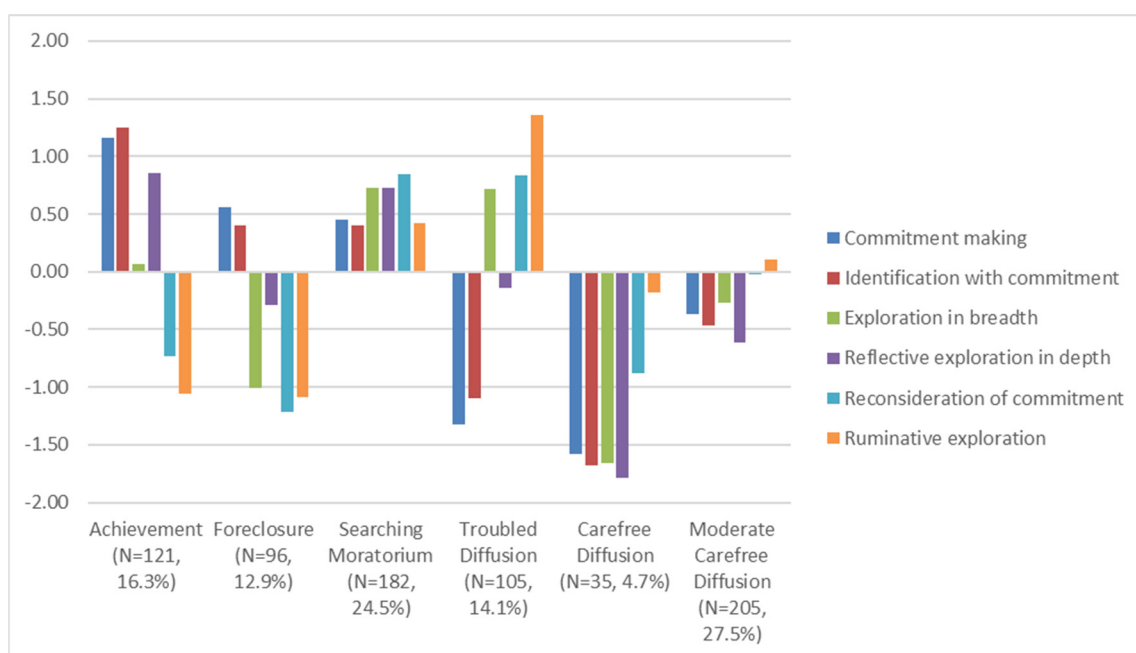
FIGURE 2 *Z*-scores for the final cluster solution in Study 1 (*N* = 744).

Third, employing two separate two-way MANCOVAs controlling for gender and age, the clusters were compared on well-being and economic status. The results revealed, as expected, that individuals in the high commitment statuses (i.e., achievement and foreclosure) were the best off and those in the low commitment statuses (i.e., troubled and carefree diffusion) the worst off. Individuals in the searching moratorium and moderate carefree diffusion statuses showed intermediate scores. For economic status, however, the differences were much smaller. Nonetheless, generally in line with expectations, the (carefree) diffused individuals scored significantly lower on all the measures of economic status than those in the five other status groups. Then again, for the occupation variable, the troubled and carefree diffusion statuses were significantly overrepresented (and

searching moratorium underrepresented) among unemployed individuals (see Table 1).

TABLE 1. Proportion of occupational status in each identity status category. Note 'Chi-square tests' in last column.

Occupational status (%)		Achievement	Foreclosure	Searching Moratorium	Troubled Diffusion	Carefree Diffusion	Mod Carefree Diffusion	Total	Chi square tests of independence
Student	Count	57 (48.7)	35 (39.8)	84 (49.4)	42 (41.6)	6 (23.1)	74 (37.9)	298	χ^2(15)=33.63
	se_i	1.0	-0.4	1.3	-0.2	-1.5	-1.0		p<.01
Employed	Count	42 (35.9)	43 (48.9)	72 (42.4)	37 (36.6)	13 (50.0)	84 (43.1)	291	φ=.13
	se_i	-1.0	1.0	0.1	-0.8	0.7	0.3		N=697
Unemployed	Count	11 (9.4)	4 (4.5)	10* (5.9)	18* (17.8)	7* (26.9)	27 (13.8)	77	
	se_i	-0.5	-1.8	-2.0	2.0	2.4	1.2		
Parental leave	Count	7 (6.0)	6 (6.8)	4 (2.4)	4 (4.0)	0 (0.0)	10 (5.1)	31	
	se_i	0.8	1.1	-1.3	-0.2	-1.1	0.5		

se_i = standardized residual; * = differs significantly from expected (>+-1.96); φ = Cramer's V

3.2 Study 2

The aim of Study 2 was to examine if, and if so how, identity statuses (operationalised as *profiles*) among adolescents were associated with digital engagement, operationalised as digital skills, gaming seriousness, type of internet activity and excessive use of ICT.

First, as expected, the LPA conducted with the short DIDS (Marttinen et al., 2016) yielded five identity profiles,: *achievement* 20.4%), scoring high on both commitment dimensions, intermediate on exploration in breadth and exploration in depth (measured as reconsideration of commitment by the short DIDS), and low on ruminative exploration; *searching moratorium* (13.3%), scoring high on all dimensions; *early closure* (35.4%), scoring intermediate on all dimensions; *ruminative moratorium* (15.2%), scoring low on both commitment dimensions and moderately high to high on all three exploration dimensions; and *diffusion* (15.7%), scoring moderately high on ruminative exploration and low to very low on the other dimensions. Figure 3 shows the final profile solution.
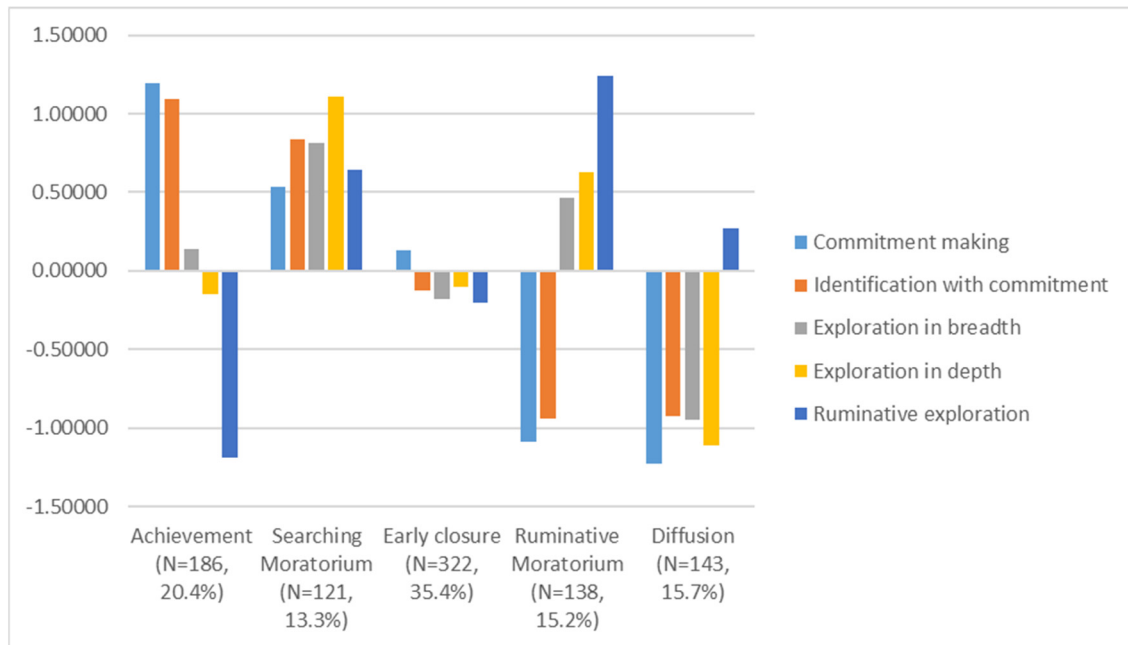
FIGURE 3   The final latent profile solution in Study 2 (N = 910). Z-scores for commitment making (CM), identification with commitment (IC), exploration in breadth (EB), exploration in depth (ED), ruminative exploration (ED).

Second, the profiles were compared on digital engagement employing a two-way MANCOVA controlling for gender, parental SES and life satisfaction. The results revealed, as expected, that individuals in the high commitment statuses (i.e., achievement, including searching moratorium) were the most advanced in digital skills, while diffused adolescents were at the other end of the continuum. Participants in the achievement status group were also the least prone to excessive use of ICT. In contrast, adolescents lacking commitments but actively trying to solve their identity crisis (ruminative moratorium) were the most engaged in friendship-driven internet activity and the most inclined to excessive use of ICT. Diffused adolescents, on the other hand, were least engaged in friendship-driven internet activity. No differences between the profiles were found in gaming or interest-driven internet activity.

3.3   Study 3

The aim of Study 3 was to examine, in a representative sample of Finnish young adults, 1) how the five identity commitment and exploration processes of the short DIDS (11 items, Marttinen et al., 2016) develop between two measurement points (at age 24 and 29), 2) if gender and transitional events during this period moderate changes, and 3) which developmental task has the strongest impact on changes in identity processes over time. The attrition analyses showed that men

and unemployed persons were only slightly but significantly more likely to drop out during the study than the others.

The results were partly in line with the hypotheses. First, both commitment processes and exploration in breadth decreased significantly between ages 24 and 29. The exploration in depth and ruminative exploration levels, however, did not change. Second, a repeated measures ANOVA showed, as expected, that identity formation was not moderated by gender. However, the results for moderation by developmental tasks were more mixed. For instance, as expected, commitment making did not decrease for those participants who were or became parents during the study. Similarly, identification with commitment did not decrease in those who had an education-related full-time job during the study. Contrary to expectations, however, identification with commitment did not decrease for those who lost or quit their education-related full-time job. Another unexpected result was that gaining a highly coveted job did not buffer against a decrease in identification with commitment. Furthermore, whereas lack of an education-related full-time job at both age 24 and 29 was associated with a significant increase in ruminative exploration, losing or quitting one's job was, unexpectedly, associated with a significant decrease in ruminative exploration. Finally, partially in line with expectations, the regression analyses revealed that becoming a parent during the study was uniquely and most strongly associated with an increase in commitment making and identification with commitment and a decrease in ruminative exploration. Attaining an education-related full-time job, in turn, uniquely predicted a decrease in exploration in depth and in ruminative exploration. Independent living and marriage/cohabitation, as expected, were not uniquely associated with changes in the different identity processes.

4 DISCUSSION

This dissertation research targeted some of the most glaring gaps in the identity literature. Specifically, the objective was to examine the associations of personal identity formation, operationalised as identity statuses, with well-being, financial standing, digital engagement and success in key developmental tasks of young adulthood. The backdrop to this research consisted of the societal transformations, postponement of education-work transitions and revolution in social interaction brought about by digital technology that have taken place in recent decades. Finnish adolescents and young adults were the focus owing to the societal context of interest, viz., relative social and economic prosperity. The present research, conducted within the identity status paradigm, employed quantitative measures (the DIDS) to investigate identity processes and detect identity statuses (i.e., combinations of exploration and commitment processes). Moreover, identity processes were followed over two time points and their dynamic relationship with the main developmental tasks of young adulthood was examined. Below, the implications of the main findings are discussed in light of the previous research and theory.

4.1 Theoretical implications

First, the Finnish DIDS (25 items) utilised in Study 1 did not support the hypothesised five-factor structure of the measure. Instead, in line with previous results by Zimmerman et al. (2013), Beyers and Luyckx (2016) and Skhirtladze et al. (2016), a six-factor model showed better fit to the data sample. In this model, exploration in depth was divided into two different sides, one supporting, and the other undermining, existing commitments (i.e., reflective exploration in depth and reconsideration of commitment). The reason for this outcome remains open.

Another problematic issue with the DIDS in Study 1 was that the internal correlation between commitment making and identification of commitment was .85 (i.e., shared variance .72), suggesting that the two variables significantly

overlapped. However, as expected, the regression analyses showed that identification with commitment, but not commitment making, was uniquely associated with subjective well-being. As suggested by Bosma (1985) and Grotevant (1987), confidence in one's future plans and not their mere presence is decisive for well-being. That is, having future plans alone does not entail a sense of continuity unless they are properly integrated into the self and emotionally invested. Further, exploration in breadth was positively, and ruminative exploration negatively, linked with well-being. In other words, being open to and willing to explore alternatives in life is generally both adaptive and positively experienced, while a sense of "getting mired" in exploratory efforts is accompanied by negative feelings and low self-esteem.

An additional finding was that while neither of the two commitment dimensions increased with higher age (age range 18-29), exploration in breadth and ruminative exploration decreased. That is, although subjects relaxed their exploration of future alternatives with increasing age, they did not grow more confident in their current plans. In the absence of reference points derived from previous studies it is hard to interpret this result. Possibly the present participants' future plans were already very strongly held at the outset of the study; if so, this would, logically, have lessened their exploration of alternatives. It is also possible that they became disillusioned as they grew older, accepting and surrendering to their choices, yet unable to form stronger and more confident commitments. Nevertheless, the results support the view that identity is not finalised in adolescence but remains in flux well into young adulthood (Carlsson et al., 2015; Fadjukoff et al., 2016). However, whether identity consolidation has become more prolonged and difficult than before, as theory posits (e.g., Côté, 2006a; Elliott & Lemert, 2009), cannot be deduced from these results owing to the lack of reference points. Interestingly though, at the same time as having strong commitments is both discouraged and hard to achieve, it seems that in their current situation many accept and surrender to their original choices.

4.1.1 Identity statuses, well-being and socio-economic status

In Studies 1 and 2, identity statuses were derived either through cluster or latent profile analysis. Study 1 focused on the configurations of the statuses, their distribution and associations with external variables, and Study 2 mainly on the associations between the statuses and digital engagement.

Study 1, in a community sample of young adults (age range 18-19, mean age 25), found five statuses similar to those identified in previous research: achievement, foreclosure, searching moratorium, troubled diffusion and carefree diffusion (e.g., Luyckx et al., 2008; S. J. Schwartz et al., 2011). In addition, a sixth status resembling carefree diffusion but with levels closer to the sample means was labelled moderate carefree diffusion. However, contrary to the original theory and the results of previous studies with adolescents in Belgium, the United States, France, Switzerland and other Finnish young adults (Luyckx et al., 2008; Marttinen et al., 2016; S. J. Schwartz et al., 2011; Zimmerman et al., 2013), the achievement group did not score high but only intermediate on exploration in

breadth. Despite this, the present finding was in line with Skhirtladze et al. (2016), who linked their result with narrow opportunities, weak financial security and the collectivistic culture that Georgian young adults face. In other words, it is futile to explore options when choices and opportunities in life are few. Mirroring this, the exploration in breadth dimension was also negatively associated with well-being. The individualistic Finnish culture, however, would seem to be much the opposite of the Georgian. In line with this notion, exploration in breadth was a positive process for well-being among the Finnish young adults. Yet, as with the Georgian young adults, being open to and willing to explore alternatives was not common in the presence of strong commitments (achievement status). The reason for this remains open[2]. It is unlikely that age moderated the differences as in the adolescent sample of Study 2, achievement also consisted of low exploration in breadth. Factor structure was also an unlikely moderator as both Study 2 and the previous Finnish study conducted by Marttinen and colleagues (2016) used the five-dimensional DIDS.

Yet, as expected, statuses characterised by relatively strong commitment and low exploration (i.e., achievement and foreclosure) were in general the best off in psychological well-being while the diffusion statuses were the worst off. This result showing that having commitments (in this case future plans) entails low anxiety symptoms, high self-esteem and higher levels of happiness and life satisfaction, was in line with previous findings (S. J. Schwartz et al., 2015). One can assume that having future plans provides security due to the sense of direction, predictability and continuity that follows from it. Further, in terms of wealth differences, diffused individuals in general and carefree ones in particular were in a significantly poorer economic situation than those in the other statuses. This was nevertheless associated with having a job as these two statuses were overrepresented among unemployed individuals. Obviously, lacking employment is likely to mean a low income and uncertain future plans whereas for achieved individuals the opposite can be expected to be true. Then again, carefree diffused individuals also reported the lowest childhood family incomes and smallest expected inheritance. This suggests that a much longer perspective is needed, one that includes family background and other structural factors influencing the later ability to commit (see Côté, 1996 for identity capital)[3]. These results also echo Erikson's theory as they show that identity (i.e., exploration of and commitment to future plans) does not develop in a vacuum but is instead associated with both past experiences and the current life situation.

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[2]   Comparison of the mean levels of the identity dimensions (Study 1) between Finnish and Georgian young adults reveals that the Finnish young adults were significantly less committed (commitment making: $M = 3.51$, $SD = 0.91$; $M = 3.70$, $SD = 0.75$; t(3.17), p = .002) and less confident (identification with commitment: $M = 3.42$, $SD = .79$; $M = 3.81$, $SD = .67$; t(7.5), p = .001) about their future plans than their Georgian peers.

[3]   Although not part of the present research interest, the longitudinal FinEdu data used in Study 3 showed that *career self-efficacy* at age 15 was significantly higher for those with identity achievement status at age 29 than those with diffused status.

Overall, the identification and labelling of statuses is dubious because it is based on differences in standardised scores on the identity dimensions (i.e., status differences are relative) and there are no objective criteria to apply in the process. Hence, status labelling is left to the researcher's interpretation based on previous results and practices. For instance, individuals scoring around the mean on all the identity dimensions have been labelled undifferentiated, owing to the "flat" figure of the group. As Meeus (personal communication, ISRI conference, May 20th, 2017) pointed out, however, "undifferentiated" connotes some form of leftover or unidentifiable group. But individuals scoring around the mean are not unidentifiable with respect to the identity dimensions. The existence of intermediate scores is evidence that some commitments and exploration of alternatives has already been undertaken; this, most importantly, is significantly more identity work than has been done by diffused individuals. Meeus and colleagues (2010) have recognised this situation by labelling this type of group (early) closure. In Study 2, one of the statuses was identified as early closure whereas in Study 1 no group was labelled early closure or undifferentiated. This was because the group that scored closest to the mean on all the identity dimensions nevertheless scored moderately below the mean and was similar in composition to the carefree diffusion group, and was thus labelled moderate carefree diffusion.

The labelling of carefree diffusion was also highly problematic. Carefree diffusion was identified as such due to the group's low levels on all dimensions (including ruminative exploration). This combination of identity dimensions rendered it identical with the groups previously labelled carefree diffusion and set it apart from the troubled diffusion group (i.e., high scores on ruminative exploration) (e.g., Luyckx et al., 2008; S. J. Schwartz et al., 2011). However, examination of the subjective well-being scores revealed that both groups (carefree/troubled) were in fact equally worse off. In addition, and surprisingly, individuals in the troubled diffusion group scored significantly higher on self-esteem than those in the carefree diffusion group. What this suggests is that either Finnish carefree diffused young adults are not as well off as might be expected or the status label was misleading from the beginning. Namely, in the former case, the results suggest that although lacking clear future plans (i.e., diffusion) does not have to entail rumination (therefore "carefreeness"), this condition is nonetheless accompanied by low psychological functioning, and thus not a harmonious state, as theorised by some (Born, 2007; Gergen, 1991). This would also support Schwartz et al. (2011), who found high-risk behaviour among carefree diffused adolescents. With respect to misleading labelling, however, the best interpretation of the data is that troubled diffusion should in fact have been labelled ruminative moratorium (weak commitments but high exploration) and carefree diffusion just diffusion (and moderate carefree diffusion in turn moderate diffusion). This is supported by the fact that both the troubled and carefree diffusion groups were equally poorly off economically. As Kraus (2007) concludes, true "joyful" diffusion exists but only when accompanied by ample social and economic resources. Retrospectively, then, in either case, the term "carefree" and the hypothesised "adaptivity" of the status seems somewhat unwarranted in this study. This result

suggests that the Finnish welfare context may play a role in prolonging young adult's identity exploration or even their avoidance of identity issues. At any rate, it does not seem to significantly alleviate the negative mood associated with uncertainty and the absence of an anticipated future. According to this interpretation, the correct line-up of the identity statuses would have been achievement, foreclosure, searching moratorium, ruminative moratorium, diffusion and moderate diffusion.

Moving on to the distribution of the statuses in Study 1, only one-sixth (16.3%) of the sample was classified as achievement and even less as foreclosure (12.9%). Thus, in this sample of Finnish young adults with a mean age as high as 25, regardless of whether they were students or employed or unemployed, less than one-third were relatively certain about where they were heading in life and had slowed down their exploration of future plans. Individuals in the searching moratorium group (24.5%) also had somewhat clear future plans but these were considered uncertain due to extensive exploration of alternatives and rumination. Most interestingly, then, nearly half of the individuals in the sample were classified in one of the diffusion statuses. This finding resembles that of Marttinen and her colleagues (2016), who found that over 40% of Finnish young adults were classified in the different diffusion or "uncertain identity" statuses (although her sample was slightly younger than the one in this study). If a comparison is made with previous studies employing the DIDS with adolescents and young adults across different cultural contexts (e.g., Luyckx et al., 2008; Luyckx et al., 2014; S. J. Schwartz et al., 2011; Zimmerman et al., 2013), this high number of diffused individuals is remarkable not only because it is higher than reported elsewhere but also because young adults at a comparably high mean age were in focus. In other words, despite the fact that most had already chosen an educational track or were in working life, that is, they could be expected to be engaged in realising clear future plans, this was not the case. The non-longitudinal setting used, however, leaves open the question whether these young adults had been more engaged prior to the time of measurement. To sum up, the status distributions in this Finnish sample suggest that identity is not exclusively a task of adolescence but instead an ongoing and highly relevant task for young adults (Arnett, 2014).

In addition, the results provide some cautious support for the notion that the proportion of diffused individuals may have increased over time (see Born, 2007; Côté, 2006c; Gergen, 1991; Kraus, 2007; Marcia, 1989 for discussions). Fadjukoff's (2007) longitudinal study of Finnish adults provides a reference point for this possibility. Comparing the young adults of Study 1 with Fadjukoff's subjects studied back in 1987 at age 27, we observe that the number of committed individuals (achievement and foreclosure) is now somewhat lower and the number of diffused individuals higher than back then (even if troubled diffusion was to be relabelled ruminative moratorium). Fadjukoff's sample, now in their fifties (Fadjukoff et al., 2016), also reported experiencing identity issues as more challenging in contemporary society than before. It should be noted, though, that this kind of comparison is inadequate and problematic at least. The data Fadjukoff

used were based on interviews and her focus was, among other things, on occupational identity (i.e., not general future plans) and thus her findings are not directly comparable with those of the present study (see S. J. Schwartz, 2001 for earlier discussion).

The above findings reflect the theory of individualisation and the results of studies on the prolongation of youth and postponement of transitions (Arnett, 2006; 2014; Côté, 2000). That is, identity does not seem to be a normative and exclusive crisis of adolescence. At least in current circumstances, identity is perhaps never really stabilised due a continuous process of social and economic transformation. There is a conflict between the need to make permanent decisions and the pressure to stay flexible and uncommitted regarding one's education, career and roles. In addition, the finding that diffusion was more prevalent among Finnish than, for instance, among Italian or Georgian young adults (Crocetti et al., 2011; Skhirtladze et al., 2016) suggests that the unique Finnish welfare context, besides offering vast and equal opportunities, may simultaneously hinder decision-making and engender confusion, as some have expected (see B. Schwartz, 2000). This hypothesised link, however, needs further research. Hence, turning the interpretation of the current results on its head, one can state that as many as one-sixth were happily committed to some future plans.

It is worth keeping in mind that the proportion of diffused individuals (or any group) depends on the relative levels of the identity dimensions and whether any undifferentiated group is identified. As Waterman (2015) pointed out, status comparisons between studies should ideally be made based on differences in mean levels. It follows from this that any cross-cultural comparisons between findings that exclude means and checks for measurement invariance are unwarranted.

To some degree, the present results also echo van Hoof's (1999) concern about the lack of true construct validity of the statuses. Although the statuses were significantly and clearly differentiated in terms of identity commitment and exploration levels, the differences in their associations with external variables such as well-being and economic situation were weaker. That is, significant differences in well-being generally emerged between the high and low commitment statuses (with searching moratorium often in between). Significant differences in economic situation, in turn, generally emerged between carefree diffusion and the other statuses. In other words, instead of 5-6 clearly differentiated statuses, there were only 2-3.

4.1.2 Digital engagement

The objective of Study 2 was to explore in detail if identity statuses among adolescents are associated with digital engagement, operationalised as digital skills, type of internet activity, gaming and excessive ICT use. The identity statuses identified in Study 2 were achievement, searching moratorium, early closure, ruminative moratorium and diffusion. Further, because gender and SES have previously been linked with digital engagement (e.g., Heinz, 2016; Robinson et al., 2015), these were controlled for in the analyses.

In line with expectations, the results showed that adolescents with future plans, for some coupled with exploration of other alternatives (i.e., those with the achievement and searching moratorium statuses), were the most competent digital technology users while diffused individuals were the least competent. In other words, having future plans and a direction in life goes hand in hand with good skills in information search, writing, designing and programming with digital devices. These adolescents are well equipped for the 21st century knowledge society which demands both increased self-determination and flexibility in terms of education, career and roles. Further, the fact that identity-achieved adolescents were the least and individuals in the ruminative moratorium status the most prone to excessive ICT use suggests that one's general mood spills over to digital practices. Addictive digital technology use among those classified as ruminative moratorium may be interpreted as an attempt to reach an identity solution. Thus, excessive ICT use should not necessarily be viewed as adaptive/maladaptive per se, but judged on its outcomes. That is, excessive ICT use may be a passing phase linked with the search for an identity solution. Similarly, adolescents with the ruminative moratorium status were the most engaged in social networking on the internet, a result indicating that online peer contacts and communities may be used in the identity formation process. In contrast, but also as expected, diffused adolescents lacking both commitments and the motivation to explore possible opportunities also showed weak digital skills and engagement in social networking. In other words, lack of commitments to future plans is paralleled by lack of digital engagement.

Finally, gaming and interest-driven internet activity was equally common across all the identity statuses. That is, achieved adolescents did not show the lowest preference for gaming and the strongest interest-driven internet activity, as hypothesised. It would seem that, gaming and searching for information on the internet are so common and widespread among Finnish adolescents that their associations with forming future plans are of marginal importance. It should be borne in mind, however, that these results would have been significantly different had gender and SES not been controlled for. Another issue is that the correlational character of the study leaves the question of causation completely open. In other words, there is no way to tell whether good digital skills lead to commitments or vice versa.

To sum up, although the present results do not tell us why advanced digital skills or a certain type of internet activity is associated with positive identity development, the results support the view of technology as an extension of mind (Belk, 2013). Digital technology allows and produces new ways and opportunities for communicating and learning. New knowledge is acquired and shared at an unprecedented speed, artefacts and products are designed and programmed with digital technology and online communities may offer a sense of belonging. Hence, digital devices operate as purposeful tools that help shape and maintain our sense of identity.

4.1.3 Interaction between identity processes and developmental tasks in young adulthood

The objective of Study 3 was to examine how identity processes of exploration and commitment evolve between two time points in young adulthood (age 24 and 29) and whether possible changes are moderated by gender and the conventional developmental transitions of that life stage (i.e., to independent living, marriage/cohabitation, education-related full-time employment and becoming a parent).

In line with the expectations and findings of Study 1, identity commitment and exploration levels decreased in general over time. That is, confidence in one's choices and future plans did not grow stronger but weaker. This was not paralleled by more but by less exploration. This implies a form of surrender in the face of the "realities" of working life. Tomasik and colleagues (2009) also found that young adults readjust and downgrade their future aspirations shortly after commencing on their career. In other words, identity commitment and exploration processes are not finalised in adolescence. A person's sense of identity does not stay fixed, but instead the processes underlying it continue to evolve in young adulthood, depending on the dynamics of internal and external expectations in the moment.

Further, the evolution of the identity dimensions was moderated by the developmental tasks of young adulthood but not by gender. The moderation effects were, however, marginal and to some extent unexpected. For instance, receiving an education-related full-time job or becoming a parent between measurements did not strengthen the commitment processes. Instead both commitment processes mostly stayed levelled and merely buffered against a decrease. Receiving a job did not even increase identification with commitment. In other words, attaining a highly coveted job was accompanied by less confidence in one's future plans. As hinted above, loss of confidence in one's future plans may be indicative of the disappointment that follows from failure to reach one's goals. The uncertainties of the labour market and demands for constant self-renewal and flexibility may lead to perpetual dissatisfaction and a questioning of one's achievements, such as "Did I make the right decision?", "Would I have been happier and more satisfied if I'd taken up my other options?" etc. (Bauman, 2007; Elliott, 2015; B. Schwartz, 2000). This questioning is related to the paradox at the core of free individual choice. That is, when an individual manifests his/her individuality by making a free choice and, for instance, achieves a longed-for goal, that choice then locks the individual into a new reality in which freedom has been lost. Therefore, in the new individualism of late modern societies, individuality is manifested only by constantly changing and looking for other alternatives.

Further, losing or quitting a job between the two time points lowered ruminative exploration and did not affect identification with commitment. Although a highly counterintuitive result, it can be explained by the fact that those who reported losing or quitting their job between the measurement points were mostly either taking care of their children at home, had become private entrepreneurs or had started studying again by age 29. Only 8% reported that they were

unemployed. That is, most of them had changed their goals and embarked on some new endeavour, thus lessening their rumination.

The regression analyses revealed that of the four conventional transitions expected in young adulthood only the "completion" of parenthood and employment were, as hypothesised, associated with stronger future plans, the former more than the latter. As an irreversible decision, it may be that parenthood functions as a strong anchoring point, providing stability and a source of meaning and predictability amidst today's labour market uncertainties.

The findings of Study 3 also support the view that identity does not have a fixed end-point in adolescence but instead remains in flux beyond that life phase. As earlier hypothesised by Erikson (1950; 1968), identity is dynamically interlinked with contextual challenges independent of the individual. That is, the results suggest that while young adults' identity exploration and commitments weaken as they move into their late twenties, these developments are partly moderated by becoming a parent and achieving an education-related full-time job, both of which are developmental transitions expected of young adults.

4.1.4   Concluding remarks

Perhaps the most significant finding of this dissertation research is the comparatively widespread identity diffusion observed among Finnish young adults. This is intriguing when considered against the background of how Finland has fared in several international surveys. As is commonly known, Finland has been ranked globally as number one in happiness (World Happiness Report, 2018) and education (World Top 20 Project, 2019) and as one of the best countries in overall quality of life (OECD, 2019). Somewhat paradoxically, however, other reports show that Finland simultaneously ranks close to the top or at least above average in the prevalence of depression, depending on the study and criteria used (Ferrari et al., 2013; Rai, Zitko, Jones, Lynch, & Araya, 2013). Some argue that this is possible because happiness (cf. life satisfaction) and depression are not opposites, but in fact different dimensions (e.g., Martela, 2018). Whereas the former is explained mainly by "objective" circumstances (e.g., GDP, social services, freedom from oppression, trust in government), the latter has to do with the subjective meaning of life. Echoing Erikson's theory (1950; 1968), Baumeister and colleagues (2013) recently showed that meaning in life, but not happiness (cf. life satisfaction) is related to personal identity concerns. Further, meaning in life was found to be temporally oriented in both the past, present and future, while happiness was anchored only in the present. In other words, the high prevalence of depression and identity diffusion among Finns might to some degree be linked, suggesting that Finns experience what Baumeister and colleagues (2013) somewhat cynically called a "happy but meaningless life". Relatedly, the French sociologist Ehrenberg (2010) has linked depression on a societal level with the burden of autonomy, that is, the immense individual responsibility for success demanded by modern, highly individualistic societies (recall Elliott & Lemert, 2009; as well as B. Schwartz, 2000 on the emotional costs of relentless re-invention of identities and multitude of choices). Ehrenberg argues that depression *is* a sense of weariness,

of feeling insufficient and unable to live up to the expectations of self-determination and individual meaning-making when external support and sources of meaning are lacking or fluid.

To conclude, this would suggest that in the Finnish cultural context, the wide range of societal opportunities and high expectations of self-realisation on the one hand and the individual psychological capacities of autonomy and flexibility on the other do not match. At least the gap between them might be greater than in other western individualistic societies. A closer investigation of this conundrum, however, lies far beyond the scope of this thesis.

4.2   Policy recommendations

Optimising identity formation is not solely an individual question but also a societal one (Erikson, 1964). Finding your own meaningful and productive path in life contributes to the broader welfare and potential of the collective. Greater developmental individualisation positively influences, for instance, national health and the economy, political awareness and participation, and "moral-ethical standards and global-universalistic outlooks" (Côté, 2006b). Therefore, the effects of societal institutions on identity formation and not individuals and their well-being must be targeted. If, as this research suggests, identity issues (in this case planning for the future) remain crucial for a considerable proportion of Finnish young adults and are linked with external circumstances, thereby rendering the formation of a sense of identity more challenging than in the past, some cautious policy recommendations can be offered.

First, because a sense of identity is linked with both past and present economic resources and occupation (cf. identity capital, Côté, 1996), governments should counteract individual uncertainty and unpredictability on a structural level either by stabilising labour markets and the conditions in which identity choices/future plans must be made, or by stabilising people's livelihood during unemployment, for instance, through a universal income. This would reduce the stress and anxiety related to "drifting around" and "wrong life path choices" by strengthening confidence in financial security and planning for the future (e.g., switching education/career track), and possibly also increasing the willingness to start families.

Second, in light of the present results, an important societal investment would be the provision of extensive ICT education in schools. Teaching digital competencies such as use of different databases, information search and sharing (i.e., digital communication) and media creation (e.g., some degree of programming and graphic design) could facilitate and support identity formation by advancing knowledge accumulation, new skills acquisition and decision-making capacities, all of which are necessary for social integration in the digitally networked societies of the 21st century. This would simultaneously benefit adolescents' identity development, ensure equal life path opportunities for all and in the long run combat marginalization on a national level.

On a more general level, adolescents and young adults could benefit from education in individual choices – why and how choices need to be made (more on the issue see Côté, 2005). Contemporary societies require agentic skills that were not necessary in the past. Youth need to continuously adapt to changing circumstances, discard old commitments and form new ones. The present research, however, suggests that alarmingly few young people seem to be up to this task and thus at risk for lower psychological functioning. Learning how to master decision-making must become a central task in young people's lives. In addition, because choices need to be made in an increasingly uncertain environment, characterised by flexible social relationships and career paths inconsistent with long-term planning, young people could benefit from having better mental coping skills. Tolerance of uncertainty could be strengthened among adolescents through education in the philosophical and psychological underpinnings of uncertainty and anxiety and how these can be alleviated.

At the same time, however, adolescents also need a deeper understanding of society, its structures and transformations. Currently, political participation among young people seems to be both in decline and changing (e.g., Blais, Gidengil, & Nevitte, 2004; Denemark & Niemi, 2012; Ekman & Amnå, 2012). Adolescents must be more profoundly educated in collective matters and political participation so that they understand how to change societal circumstances, for instance, reduce labour market instability. Otherwise we risk psychologising and individualising young people's difficulties, that is, searching for (intra-)individual solutions to societal and structural problems.

Finally, against a background of uncertainty and rapid changes in the labour market, the choices available to school children and young students must be kept open through the provision of a broad education. In recent years, Finland has witnessed a debate about, and has moved towards, having students make binding decisions about their educational future at an increasingly younger age. The end goal is, via raising the level of specialisation and know-how among younger children and students, to enrich the labour market with an ever more skilful and competitive workforce. While this line of argument may be suited to a world of stable future prospects, in the current situation, which is quite the opposite, it can only be destructive. Young adults who are already highly specialised will encounter more difficulties in switching their education/career track. This will increase their fear of making the "wrong choice", which in turn will put more pressure on younger students and their parents. In other words, we will end up producing more, not less, inflexibility among young adults, precisely the opposite of what current governments aim at. If we are to take individualism and related freedom of choice seriously in an age of rapid social and economic transformation, adolescents and young adults must be educated for choice and able to swap their life paths when needed.

4.3 Limitations and directions for future research

The present results have their limitations. To begin with, this dissertation research examined only one identity domain, albeit a significant one for adolescents and young adults (i.e., general future plans). Identity has been theorised as a multilevel phenomenon dependent on context (Côté, 2006b). In line with this, future research should more thoroughly examine and compare identity processes and statuses simultaneously across different identity domains (e.g., Goossens, 2001). Studies should investigate, for instance, the dynamics between different domains and external variables, such as occupation and well-being, to determine which domain seems most important for whom and at what point in time. At the same time, recalling the critique by van Hoof (1999), statistical research leaves out the subjective component. That is, we do not know the exact role and meaning of expressed exploration and commitments in relation to future plans (the so called behavioural aspect) for the subjective sense of identity (Waterman, 2015). Therefore, qualitative research employing interviews that target the meaning of different domains for a subjective sense of temporal-spatial continuity are urgently needed (e.g., Carlsson et al., 2015). Until then, one should be cautious in using sweeping expressions such as "having" or "lacking" an identity (in singular).

Second, Studies 2 and 3 employed the short DIDS. These results are not straightforwardly comparable with studies using the original 25-item DIDS as the short version assesses exploration in depth with items later associated with reconsideration of commitment (Beyers & Luyckx, 2016; Skhirtladze et al., 2016; Zimmerman et al., 2013). Based on internal and external associations, reconsideration of commitment is akin to ruminative exploration and hence completely omits the supportive, positive aspect of in-depth exploration of current commitments. The relations between these two versions of the DIDS need further scrutiny. Therefore, while the short DIDS is fully applicable in future studies, it should optimally include items assessing all six dimensions. Another issue with the DIDS (regardless of length) is the unfortunately high intercorrelation that has repeatedly been observed between the two commitment dimensions. These need to be more clearly differentiated in wording and meaning. A third factor that should be considered and developed in future research with the DIDS is the possibility of adding to the measure dimensions or aspects that have earlier been discarded, such as *identification with significant others*, *past exploration* and *commitment-related activity* (see Waterman, 2015).

Third, several limitations regarding the sample merit attention. The samples in Studies 1 and 2 were not random. Study 1, although fairly balanced in terms of gender, age, income, and occupation, consisted of young adults registered to a web panel. Study 2, in turn, consisted only of high school students from the Helsinki metropolitan region who had relatively high GPAs, a high SES background and who voluntarily took part in the self-report study. In other words, the results of these studies are susceptible to geographical, SES and self-selection

bias and any generalisations should therefore be cautious. On the other hand, a starting point for this research was that identity formation is context-dependent (e.g., culture, SES) and hence broad generalisations were not the goal. Therefore, as mentioned above, future studies should target more diverse samples, that is, youth in different life situations and from different backgrounds (cf. identity capital, Côté, 1996). Further, Studies 1 and 2 consisted of cross-sectional samples. That is, they did not address causality or identity status development per se but simply provided a snapshot of current identity status and related correlates. Future research should employ longitudinal designs to better capture the development and causal dynamics of identity processes, statuses and relevant correlates. In addition, these studies should be sensitive to intra- and interindividual differences. The Dynamic Systems Theory (Kunnen, 2012), for instance, provides a promising framework for studying identity longitudinally. This approach acknowledges complexity in development, that is, differences in individual and group trajectories and how they change in parallel with circumstances.

Fourth, all studies were conducted as self-administered paper-and-pencil or online questionnaires. That is, the researcher was completely dependent on the honesty, transparency and self-evaluation capabilities of the respondents. Relatedly, the self-report measures were also influenced by the specific interpretative framework of the researcher and the whole research field. In other words, self-report measures do not reveal how respondents interpret the questions while the researcher, in turn, does not have the opportunity to probe the subjective meaning behind certain response patterns. For instance, a pertinent question regarding Study 3 is "What does a linear decrease in identity exploration and commitments over the five-year period really mean?" There is no way to tell whether the observed change reflects an "objective" decrease, or whether respondents have merely readjusted and changed their horizons (i.e., subjective criteria/standards). In the course of completing several significant transitions between ages 24 and 29, the subjective meaning of certainty in commitments and the desirability of exploration may change significantly. Thus, future studies should, once again, through individual interviews, target subjective meaning making in relation to how commitments and exploration are understood; for instance, why does identification with commitment decrease despite the attainment of highly coveted job?

Fifth, regarding specific measurement issues, several well-being variables in Study 1 were assessed with single-item measures. In general, short measures tend to suffer from low reliability because of the broad and heterogeneous constructs they seek to assess (Loo, 2002; Postmes, Haslam, & Jans, 2013). They also suffer from low variance which might render significant differences in variables harder to detect. Although the reliability of these specific measures was not confirmed through, for instance, comparisons with longer versions in the same sample, the single-items employed were well established measures used in social scientific research. Nevertheless, according to the literature, longer versions should be preferred in research when possible. Moreover, the measure of excessive ICT use applied in Study 3 did not distinguish between different types of ICT use.

The present findings and previous mixed results on digital engagement and well-being suggest that future research should discriminate between addictive behaviours related to gaming, social networking etc. This would yield a more nuanced picture of what aspects of "excessive" ICT use are positive, trivial or harmful.

Sixth, as already mentioned, the identity statuses showed relatively small effects on all the external variables except for well-being. Again, supporting van Hoof's (1999) validity critique, the results revealed only two or three clearly distinguishable statuses (in particular achievement and diffusion), rather than five or six. However, it is worth remembering that in the case of digital engagement, for instance, gender, SES and life satisfaction were controlled for. When these variables were not controlled for, then the differences between the statuses became stronger. Also worthy of note, even marginal effect sizes in small studies become large effects on the societal level. Relatedly, and as already mentioned, comparing statuses and their distributions at different time points based solely on identity configurations is highly problematic. As Waterman (2015) notes, comparing relative differences in distributions (e.g., standardised scores) without any objective criteria could conceal large changes in identity over time even if the identity distributions remain roughly the same. Thus, future studies should attempt to integrate, for instance, mean-level comparisons into comparative and longitudinal research designs.

Ideally, then, what is needed are longitudinal studies over long periods with several measurement points. These would make it possible to target both individual trajectories and structural patterns of identity processes in large samples of respondents from diverse backgrounds. These results could then be supplemented and connected with those of qualitative studies of individual meaning-making among smaller subsamples. Moreover, to address theories of increased individualisation, generational differences in identity status distributions should also be examined. In addition, the factors that contribute to tolerance of identity uncertainty should be investigated.

Finally, despite above-mentioned limitations, the present research has several strengths. It is one of the few studies thus far to combine a variable- and person-oriented approach in examining identity formation processes and statuses in representative samples (in Study 3 and partly in Study 1) of young adults. This allowed the evaluation of identity formation across different occupations and in relation to key developmental tasks of young adulthood. In addition, this research effort is to the present author's knowledge the first to examine the associations between identity and digital engagement, which has been hypothesised to be an essential component of the identity formation process and one necessary for successful integration in contemporary society (see Erikson, 1950; 1968 on industry). Last of all, despite the focus on the Finnish cultural context, the findings reported here increase our general understanding of identity as a context-dependent, fluid process.

4.4 Conclusion

This research examined how identity processes and statuses among Finnish young adults are related to well-being, financial standing, digital engagement and key developmental transitions of young adulthood. The backcloth to the research was provided by Erikson's (1950; 1968) psychosocial theory on identity development, more recent sociological theories on individualisation and the postponement of developmental tasks (e.g., Arnett, 2006; Bauman, 2001; Buchmann & Kriesi, 2011) and digital technology as extensions and tools of the mind (Belk, 2013).

In conclusion, the present research contributes to our understanding of identity formation as part of the life course, especially beyond adolescence, and some of the factors contributing to adaptive and maladaptive identity formation in adolescence and young adulthood. The findings on identity statuses showed that, even in their late twenties, Finnish young adults were comparatively diffused regarding the identity domain of future plans. Those with strong future commitments were the best off in well-being and both past and present economic situation. Further, the longitudinal analyses showed that the identity exploration and commitment processes decreased as young adults approached their late twenties, even though most of them had already completed their education and attained education-related full-time employment at that point. Parenthood was the factor most strongly associated with adaptive identity development. Moreover, identity formation was associated with digital practices and competencies among the present sample of Finnish adolescents.

Taking the specific Finnish cultural context into account, the results suggest that identity remains a critical challenge for young adults in their late twenties. It is dynamically linked with their social and economic circumstances and the work-related skills required by contemporary societies, such as digital competence. These results are in line with Arnett's (2014) observation that identity does not seem to be a normative and exclusive crisis of adolescence. Identity is never finalised but remains in flux depending on a variety of circumstances. In light of the theory on the new individualism (Elliott & Lemert, 2009), one could perhaps conclude that MAMA-cycles (i.e., moratorium-achievement-moratorium-achievement, Stephen et al., 1992) are intensifying. If so, there is less reason for future identity research to focus on adolescence as the time of identity formation.

YHTEENVETO (SUMMARY)

Epävarmat tulevaisuuden suunnitelmat – Persoonallinen identiteetti ja sen yhteys hyvinvointiin, digitaalisten laitteiden käyttöön ja sosioekonomiseen tilanteeseen suomalaisilla nuorilla ja nuorilla aikuisilla

Tässä väitöskirjatutkimuksessa selvitettiin, miten suomalaisten nuorten ja nuorten aikuisten identiteettiprosessit ja -statukset kytkeytyvät psyykkiseen hyvinvointiin, taloudelliseen asemaan, digitaalisten laitteiden käyttöön ja nuorten aikuisten läpikäymiin, keskeisiin kehitystehtäviin. Persoonallisella identiteetillä tarkoitetaan tunnetta *minän* samuudesta ja jatkuvuudesta menneisyyden, nykyisyyden ja tulevaisuuden välillä, joka syntyy henkilökohtaisista arvo- ja roolivalinnoista sekä tulevaisuuden tavoitteista. Tästä syntyvä kokemus suunnasta ja merkityksestä elämässä on kriittinen psyykkisen hyvinvoinnin ja sosiaalisen integraation kannalta. Identiteettiprosesseilla viitataan tässä tutkimuksessa puolestaan yksilön laadultaan erilaisiin mutta rinnakkaisiin tapoihin *pohtia* tulevaisuuden suunnitelmiaan ja *sitoutua* niihin. Näitä prosesseja mitattiin The Dimensions of Identity Development Scale-mittarilla (DIDS; Luyckx et al., 2008). Identiteettistatukset puolestaan ovat näiden prosessien erityyppisiä kombinaatioita ja ryhmiä, jotka kuvaavat missä vaiheessa tai tilanteessa identiteetin kehitys parhaillaan on (esim. selkeä vs. selkiintymätön identiteetti).

Erik Eriksonin (1950, 1968) psykososiaaliseen elämänkaariteoriaan perustuen aiempi psykologinen tutkimus (katso katsaukset mm. Marcia, 1993; S. J. Schwartz et al., 2015) on tarkastellut persoonalliseen identiteettiin liittyviä valintoja lähinnä teini-iän haasteena (poikkeuksena esim. Fadjukoff, 2007). Identiteetin kehitys on yleensä nähty ympäristöstä riippumattomana, lineaarisena kehityskulkuna, joka saavuttaa päätepisteensä (eli vakauden) kolmannelle vuosikymmenelle tultaessa. Viime vuosikymmenten sosiaaliset ja taloudelliset muutokset länsimaissa ja niihin kytkeytyvä elämänvalintojen yksilöllistyminen ovat kuitenkin mutkistaneet nuorten päätöksentekoa ja lykänneet näiden koulutusvalintoja, työelämään siirtymistä ja perheen perustamista (esim. Arnett, 2006; Bauman, 2001; Buchmann & Kriesi, 2011). Ympäristön vaatiessa jatkuvaa sopeutumista ja itsensä kehittämistä loputtomien uusien valintojen muodossa, identiteetti jää epävakaaksi. Toistaiseksi tiedetään vielä hyvin vähän siitä, miten persoonallinen identiteetti kehittyy teini-iän jälkeen ja miten eri sosiaaliset, taloudelliset ja teknologiset tekijät vaikuttavat kehitykseen. Esimerkiksi digitaalisten laitteiden käytön ja digiosaamisen on arvioitu vaikuttavan merkitsevästi identiteetin kehitykseen, mutta tämän yhteyttä persoonalliseen identiteettiin ei ole aiemmin tutkittu (Belk, 2013; Manago, 2015).

Tämän väitöskirjan *ensimmäinen osatutkimus* osoitti identiteettiin liittyvän epävarmuuden olevan suhteellisen yleistä suomalaisten nuorten aikuisten keskuudessa. Vain alle kolmasosalla oli jotakuinkin selkeä identiteetti. Odotetusti näillä nuorilla aikuisilla oli vahvin psyykkinen hyvinvointi. Selkeä identiteetti oli myös kytköksissä hyvään taloudelliseen asemaan niin lapsuudessa kuin nyky-

hetkessä. Lukiolaisotoksella suoritettu *toinen osatutkimus* puolestaan osoitti identiteettistatuksen olevan yhteydessä digitaalisten laitteiden käyttöön. Selkeä identiteetti kytkeytyi hyvään digiosaamiseen ja vähäiseen riippuvuuteen digilaitteista. *Kolmannessa osatutkimuksessa* taas tarkasteltiin etsintä- ja sitoutumisprosessien kehitystä/muutosta pitkittäisesti nuorten aikuisten keskuudessa. Yllättäen analyysit osoittivat näiden heikentyvän (eli epävarmuuden lisääntyvän) tutkittavien kolmannen vuosikymmenen loppua kohden, vaikka useimmat tutkituista olivat jo päättäneet koulutuksensa ja siirtyneet työelämään. Esimerkiksi analysoitaessa varhaisen aikuisuuden keskeisten kehitystehtävien vaikutusta identiteettiprosessien kehitykseen, ilmeni ettei edes yhä vaikeammin tavoitettavissa olevan, koulutusta vastaavan kokopäivätyön saavuttaminen suojannut omien tulevaisuuden suunnitelmien heikentymiseltä. Vanhemmaksi tuleminen sen sijaan suojasi tältä ja vanhemmuus myös ennusti kaikkein parhaiten positiivista identiteetin kehitystä.

Tästä väitöskirjatutkimuksesta voidaan tehdä johtopäätös, että nuorten aikuisten identiteetin kehitys on ainakin osittain vielä täysin kesken. Tulevaisuuden suunnitelmien pohdinta, omat valinnat ja niihin sitoutuminen eivät kuitenkaan tapahdu tyhjiössä vaan identiteetin rakentamiseen vaikuttaa niin yksilön välittömät kuin yhteiskunnan laajemmat sosiaaliset ja taloudelliset olosuhteet – rakenteelliset mahdollisuudet ja rajoitteet toisin sanoen. Näitä ovat muun muassa lapsuudenperheen ja nykyhetken taloudellinen asema (esim. palkkatyön kautta), varhaisaikuisuuden keskeisten kehitystehtävien läpikäyminen kuten vanhemmaksi tuleminen ja lisäksi yhteiskunnan keskeisten teknologioiden, kuten digitaalisten laitteiden käyttö ja osaaminen. Kehitystehtävistä etenkin vanhemmuus (peruuttamattomana valintana) näyttäisi olevan identiteetille suhteellisen vahva ja vakaa ankkurointipiste. Toisin sanoen, yhteiskunta pystyy tukemaan yksilöiden positiivista identiteetin kehitystä (eli identiteetin selkeyttä) esimerkiksi parantamalla työllisyyttä, työelämän ennakoitavuutta, miesten ja naisten tasa-arvoa työmarkkinoilla (esim. perheen perustamisen kannalta) ja nuorten tasavertaista pääsyä digitaalisten laitteiden pariin ja niiden käytön opetusta. Tämä tulisi huomioida poliittisessa päätöksenteossa, etenkin kun yksilön vahva psyykkinen hyvinvointi on yhteiskunnan menestystekijä ja selkeä identiteetti puolestaan on yksi tärkeimpiä psyykkisen hyvinvoinnin edellytyksiä.

Esillä oleva väitöskirjatutkimus auttaa ymmärtämään miten identiteetti ei (enää) ole ainoastaan teini-ikään kuuluva normatiivinen tehtävä vaan dynaaminen, läpi elämän kulkeva prosessi. Identiteetin vakauttaminen vaikuttaisi olevan haasteellisempaa kuin ennen johtuen yhteiskunnan, etenkin työelämän ja sosiaalisten normien yhä nopeammasta muutoksesta. Tulevan tutkimuksen kannalta ei näyttäisi olevan enää perusteltua tarkastella identiteetin kehitystä pelkästään nuoruuteen sijoittuvana ilmiönä.

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ORIGINAL PAPERS

I

IDENTITY STATUS AMONG YOUNG ADULTS: VALIDATION OF THE DIMENSIONS OF IDENTITY DEVELOPMENT SCALE (DIDS) IN A FINNISH SAMPLE

by

Rasmus Mannerström, Airi Hautamäki & Sointu Leikas, 2016

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Identity Status among Young Adults: Validation of the Dimensions of Identity

Development Scale (DIDS) in a Finnish sample

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Abstract

Theory and empirical findings suggest that sociohistorical changes have made identity formation a precarious developmental process in contemporary Western societies. Firm commitments may be delayed until the late twenties or discarded altogether. We tested the reliability and factorial validity of a recently developed five-dimensional process model of identity development – Dimensions of Identity Development Scale – in order to evaluate identity formation among Finnish young adults ($N = 751$, Mage = 24.6, 60.3% women) in a cross-cultural perspective. Results showed that the hypothesized five-factor model could not be confirmed as such. Instead a six-factor model, encountered only recently in two other studies, suited the sample data better. All six identity dimensions were internally and externally correlated as hypothesized and the identity status cluster solution that emerged matched previous results with one exception. Further, the surprisingly high prevalence of diffused and uncertain individuals in our sample may indicate effects of sociohistorical factors specific to a Finnish cultural context.

Keywords: identity status, carefree identity diffusion, ruminative exploration, the Dimensions of Identity Development Scale

Identity Status among Young Adults: Validation of the Dimensions of Identity

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Introduction

According to Erikson's (1950, 1968) life cycle theory, the central

developmental task in adolescence is the commitment to a stable set of values, ideals, roles,

and future goals – the formation of an identity. One of the first and most influential to

operationalize parts of Erikson's identity theory was James Marcia (1966, 1993). Marcia's

research focus lay on whether an adolescent had yet made commitments within such domains

as occupation and ideology, but also on how these commitments were reached. By measuring

the variables of *exploration* and *commitment*, Marcia derived four identity types or statuses

(identity achievement, foreclosure, moratorium, and identity diffusion) indicating the present

state of identity formation. Individuals who have explored different alternatives and

established relatively firm commitments are considered identity Achieved. If the

commitments, on the other hand, have been reached without prior exploration, then the

individual is classified as Foreclosure. Conversely, if no commitments have yet been

established, but differing alternatives are considered at the moment, the individual is

categorized as Moratorium. Finally, identity diffused individuals are characterized by no firm

commitments and low interest in exploration. According to Marcia's (1993) identity status

model, development typically proceeds from Diffusion through Moratorium to Achievement

or, directly from Diffusion to Foreclosure (see also Meeus et al., 2010). Over 50 years of

identity status research show each of the identity statuses to be clearly differentiated in terms

of personality characteristics, well-being, cognitive processes, and interpersonal behavior

(Kroger, 2003). Identity achievement is considered to be the most matured status since

individuals within this status are far better adapted on measures of psychological well-being

than diffused individuals (Marcia, 1993).

A new dual-cycle model of identity formation

During the last two decades attention has been drawn to the fact that, although

adolescence is the most crucial period for identity formation, Erikson described identity

formation not as something finalized in the twenties, but as a lifelong dynamic process (Cote

& Levine, 1988; Schwartz, 2001). In other words, the identity status model of adolescence

does not capture how established commitments are re-evaluated and transformed during the

whole lifespan. Accordingly, some scholars have extended the identity status approach in

order to better capture the ongoing process-oriented developmental aspect of identity

(Berzonsky, 1989; Bosma & Kunnen, 2001; Grotevant, 1987; Meeus, Iedema, & Maassen,

2002).

Luyckx et al. (2005); Luyckx, Goossens, and Soenens (2006); Luyckx et al.

(2006); Luyckx, Schwartz, et al. (2008) recently advanced the identity status paradigm by

proposing a dual-cycle model of identity formation. In order to capture the iterative-type

evaluation of existing commitments in line with Grotevant's (1987) and Meeus, Iedema, and

Maassen (2002) process models of identity, Luyckx et al. (2005, 2006); Luyckx, Soenens,

and Goossens (2006) extended Marcia's theory by unpacking the exploration and

commitment variables into four distinct dimensions. Whereas Marcia's exploration and

commitment variables were renamed *exploration in breadth* and *commitment making*, the

new process variables were labeled *exploration in depth* and *identification with commitment*.

Exploration in depth was defined as in-depth evaluation of existing commitments in order to

determine whether one's choices match inner desires/values. *Identification with commitment*

on the other hand, referred to the emotional firmness of the commitment made – the

"strength" of a certain choice.

In order to clarify earlier mixed findings, a fifth identity dimension – *ruminative exploration* – was added to the model (Luyckx, Schwartz, et al., 2008). Previous research had shown that exploration was associated with adaptive factors such as openness and curiosity, but also with negative factors such as heightened distress and depressive symptoms (Kidwell et al., 1995; Luyckx, Soenens, & Goossens, 2006). Consequently, Luyckx, Schwartz, et al. (2008) distinguished reflective and positive types of exploration (*exploration in breadth* and *depth*) from a more dysfunctional or ruminative type of exploration. By *ruminative exploration* Luyckx, Schwartz, et al. (2008) referred to an anxious and perpetual questioning and dwelling over identity issues, which may impede the individual from arriving at firm identity commitments. Cote and Levine (2002) conclude that especially in late-modern consumer-oriented societies, where seemingly endless possibilities of self-realization may increase confusion in adolescents, decision-making becomes more difficult. Luyckx, Schwartz, et al. (2008) proposed that an additional third, ruminative dimension of exploration would not only differentiate between components that promote and restrain identity development, but also help detect qualitatively new identity statuses relevant for identity construction in late-modern societies. The strength in Luyckx et al.'s dual-cycle model of identity formation is that it integrates and synthesizes various neo-Eriksonian research perspectives by focusing on the processes in both the formation and evaluation of identity commitments (Luyckx et al., 2011).

New identity statuses

To measure the five identity processes, Luyckx, Schwartz, et al. (2008) developed a 25-item self-report instrument – the Dimensions for Identity Development Scale (DIDS) – which assesses identity development within the content domain of general future plans. Status assignments are empirically derived through cluster analysis. This has both expanded and refined Marcia's original classification model. Luyckx and colleagues (e.g.,

2009, 2010; Schwartz et al., 2011) have in several studies and across different samples repeatedly identified six clusters, four of which strongly resemble Marcia's original statuses.

Individuals with the Achievement status typically have high scores on both commitment dimensions (i.e., commitment making and identification with commitment), moderate to high scores on *exploration in breadth* and *depth*, and low scores on *ruminative exploration*. Likewise, individuals with the Foreclosure status score high on both commitment dimensions, but low on all exploration dimensions. Individuals within Moratorium, considered to represent a transitional "crisis" (Erikson, 1968), score on the contrary intermediate to low on both commitment dimensions but high on all exploration dimensions.

Perhaps the most interesting novel feature emerging from Luyckx's work is the new Carefree variant of diffusion. What separates Marcia's original Diffusion (now labeled Troubled Diffusion) from the Carefree type is the degree of exploration and general well-being. Whereas both score low on commitment, Carefree diffused individuals do not seem to be that bothered by their current state. They score much lower on exploration, especially the ruminative type, and show higher well-being than their Troubled counterparts (Luyckx, Schwartz, et al., 2008). They seem to represent the highly flexible late-modern individual – only speculated of in earlier theory – who wants to keep all options constantly open and who might even feel troubled by firm commitments (Gergen, 1991; Marcia, 1989). However, Schwartz et al. (2011) found the Carefree diffused individuals to comprise a risk group in regard to health risk behaviors (aggression, unsafe sex, risky driving, illicit drug use, etc.). Moreover, although Carefree subjects ruminate less over their future plans than Troubled individuals, they have not consistently been better off in terms of psychological well-being (Crocetti et al., 2011; Schwartz et al., 2011). Finally, the sixth cluster found with

the DIDS has been characterized by intermediate scores on all dimensions and have been

labeled Undifferentiated.

To date the DIDS has produced consistent results in studies, for instance,

among Belgian-Dutch, German, Turkish, Filipino, American, Swiss, and French adolescents

(Luyckx, Schwartz, et al., 2008; Luyckx, Soenens, et al., 2008; Luyckx et al., 2010, 2014;

Morsunbul & Cok, 2014; Pesigan, Luyckx, & Alampay, 2014; Schwartz et al., 2011;

Zimmerman et al., 2013). The identity dimensions have shown diverse and unique

associations with different psychosocial correlates such as work engagement, burnout, and

perfectionism (Luyckx, Soenens, et al., 2008, 2010). In line with theory (Grotevant, 1987), a

core finding has been that *identification with commitment* predicts psychological functioning

far better than *commitment making* (Luyckx et al., 2006). This indicates that a commitment

contributes to a clear sense of identity not until it is firmly identified with and integrated into

one's self. Also, whereas *exploration in breadth* and *depth*, representing the adaptive side of

exploration, have been unrelated to adjustment, higher *ruminative exploration* has

consistently entailed weaker commitments as well as lower well-being (Luyckx, Schwartz, et

al., 2008; Luyckx, Soenens, et al., 2008).

Although the status structure has been virtually identical across nations and

cultures, some differences in the nature of the identity processes and the distribution of the

statuses have indeed been documented. First, in their large sample of nearly 10 000

respondents in the USA, Schwartz et al. (2011) did not find the classical moratorium cluster.

Instead, they found a cluster that was characterized by relatively high scores on both

commitment dimensions. Schwartz et al. (2011) concluded that this cluster resembled more

"Searching moratorium" described by Meeus et al. (2010) and Crocetti, Rubini, Luyckx, and

Meeus (2008), which is characterized by high exploration of new alternatives while still

maintaining prior commitments. Second, Crocetti et al. (2011) noticed that Italian young

adults within the Achieved status displayed relatively high *ruminative exploration*. Crocetti et al. (2011) linked this outcome to cultural factors, mainly the current uncertainty on the Italian labor market. Third, the results of Zimmerman et al. (2013) indicated that French young adults experienced identity exploration as less carefree than their Swiss colleagues. Mirroring Crocetti et al. (2011) the outcome was attributed to cultural factors, namely compared to France, Switzerland has more tolerant university contexts as well as more open societal context for exploration and one of the best job market prospects in Europe (youth unemployment rate 5.9% among those aged 15–24, compared to 25.7% in France). Hence, the rate of unemployment of young people coupled with the entailing cultural climate and social support seems to play a part in how identity is played out.

Finally, recently both Zimmerman et al. (2013) and Skhirtladze et al. (2016) found that the original five-dimensional model could not be confirmed as such in French-speaking and Georgian samples, respectively. The results indicated that the *exploration in depth*-dimension was internally inconsistent and had to be subdivided in two different types. One part was consistent with Luyckx, Schwartz and colleagues (2008) proposition, that is, exploration in depth strengthens current commitments. Skhirtladze et al. (2016) labeled this *reflective exploration in depth*. The other part, in contrast, corresponded with Grotevant's (1987) proposition of exploration leading to reconsideration and questioning of existing commitments. Zimmerman et al. (2013) termed this, in turn, *reconsideration of commitment*. Zimmerman et al. (2013) called for further attention to the divided nature of exploration in depth.

The current study

In his psychosocial writings, Erikson (1968) stressed that identity formation is always a function of its cultural niche. This means that socioeconomic factors specific to a social group and time period influence identity formation, for example by promoting or

cestraining it (see also Yoder, 2000). As most Western countries today share the same late modern environment of hectic and uncertain job markets requiring endless flexibility, some writers argue that perpetual exploration becomes more or less forced (Cote & Levine, 2002; Gergen, 1991). The term prolongation of youth refers to the fact that identity choices are not settled anymore in late adolescence as during Erikson's era, but are instead open-ended, fluid, or at least postponed until the late twenties or early thirties (Arnett, 2000; Cote, 2006). This means, for example, that a greater number of youth enter post-secondary studies or the job market without a clear decision on direction, leading them to swap educations or workplaces several times. Some authors have viewed this prolonged identity "crisis" as mainly positive, giving youth more time to work through different options before settling for one (Arnett, 2000). Others, on the other hand, have suggested that perpetual self-realization only impairs decision-making and leads to anxious rumination (Cote & Levine, 2002). Indeed, recent studies by Crocetti et al. (2011) and Zimmerman et al. (2013) suggest that future-related uncertainty goes hand in hand with rumination, weakens commitments and thereby psychological well-being.

Provided that Finland shares the same societal context as its western neighbours, especially the current economic crisis, one would expect a similar development to take place in Finland. We believe, however, that Finland differs from its central-European as well as American and Asian counterparts in certain respects. For example, although Finland ranks even worse in youth unemployment (27.7% among those aged 15–24 in March 2015; Statistics Finland) than France (25.5%), there are several factors that might profoundly moderate the impact of uncertainty and thereby identity-related stress. For instance, Finland has a welfare state model that relies on high social expenditures. In addition, along with other Nordic countries, Finland is considered more efficient and equal than central European welfare models (Sapir, 2005). At the same time Finland ranks globally as number one in

education (OECD, 2015). Income equality and high education level combined with strong

social security might contribute to lower worry and higher confidence in future success than

elsewhere. In other words, this unique context might allow Finns to pursue more open-ended

and flexible identities for longer periods of time more safely than elsewhere. A particularly

interesting question is, how do Finnish young adults cope in this situation compared to, for

example, their Italian and French colleagues? Is diffusion increasingly widespread among

young adults who should, according to classical identity theory, already have decided on their

life? And if so, is it experienced with anxiety, indifference or even joy? Reflecting on the

results of a longitudinal study in Germany, Kraus (2007) maintains that joyful diffusion exists

but only as far as sufficient social and economic resources are available. Understanding

identity development in the current climate is of tremendous importance from the perspective

of public health and economics: Indecision and poor well-being may lead to marginalization

and prolonged education.

Identity research within the Eriksonian-Marcian tradition has been rare in

Finland. Only recently, parallel to our study, Marttinen, Dietrich, and Salmela-Aro (2016)

translated and tested DIDS in a Finnish community sample. However, a short (11 item)

version of the DIDS they developed for their study yielded results which, especially in terms

of identity statuses, departed significantly from previous studies (e.g., Luyckx, Schwartz et

al., 2008). The purpose of our study was therefore to assess and validate Luyckx's original

five-dimensional model of identity formation for the first time among Finnish young adults

and examine their identity formation from a societal and cross-cultural perspective.

More specifically, our objectives were threefold: First, to translate and assess

reliability as well as factorial validity of the Finnish version of the DIDS. We expected the

five dimensions as well as their interrelations with variables of psychological well-being to

converge with previous findings (e.g., Luyckx, Schwartz, et al., 2008). In general, this meant

that *identification with commitment* would predict higher well-being whereas *ruminative exploration* would have the opposite effect. However, of particular interest was also the role of *exploration in depth* – would it be supporting or weakening current commitments or would it, as recently found, consist of two different aspects?

Our second objective was to check whether we could derive identity statuses through cluster analysis in our Finnish sample. Overall, we expected a similar pattern to emerge as previously observed in Belgian-Dutch, American, and Italian samples. However, given that identity formation is dependent on its societal context, we also expected some deviation from previous results.

Further, as part of the validation process we examined differences between the identity clusters regarding psychological adjustment. We expected the high commitment statuses (i.e., Achievement and Foreclosure) to score the highest and Troubled Diffusion the lowest on well-being. In light of current uncertain employment and future prospects as well as mixed findings regarding psychological well-being across the statuses, a special focus was on Carefree and Troubled individuals in particular. Due to the same reason, we also investigated how the identity statuses differed in terms of economic status. Based on previous theory and research we expected Achievement and Foreclosure to score highest, accompanied by Carefree Diffusion. Our final objective was to examine and discuss the results from a societal and cross-cultural perspective.

<div align="center">Method</div>

Participants

The sample consisted of 751 (60.3% women) individuals who participated in an online survey that was conducted by the commercial survey company Norstat. The mean age was 24.6 (SD = 3.2, range 18–29 years). Regarding life context, 40% of the respondents were students, 39% were employed, 10% unemployed, and 1% private entrepreneurs. Half

(50%) reported being married or living together with a partner and 13% had children. A total

of 36% had some post-secondary education. Reported total household net incomes were

below 3617 euros (approximately $3,821) per month for 80% of the sample. Finally, 91%

were living in cities or close to big cities.

Measures

   Identity formation and evaluation. The Dimensions of Identity Development

Scale (DIDS; Luyckx, Schwartz, et al., 2008) comprises 25 items responded to on a scale

ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). With five items per each of the five

identity dimensions, the scale measures *commitment making* ($M = 3.50$, SD $= .92$),

exploration in breadth ($M = 3.55$, SD $= .72$), *ruminative exploration* ($M = 3.00$, SD $= .90$),

exploration in depth ($M = 3.24$, SD $= .63$), and *identification with commitment* ($M = 3.42$, SD

$= .80$) in the domain of general future plans. Sample items are: "I have decided on the

direction I am going to follow in my life" (*commitment making*), "My plans for the future

match with my true interests and values" (*identification with commitment*), "I think actively

about different directions I might take in my life" (*exploration in breadth*), "I think about the

future plans I already made" (*exploration in depth*), and "I keep wondering which direction

my life has to take" (*ruminative exploration*). The DIDS was translated into Finnish by the

authors and then independently back-translated by an expert blind to the original version.

There were only minor differences and consensus was reached by discussion. Alpha

coefficients were .92, .88, .79, .58, and .83, respectively.

   Adjustment and well-being. Well-being comprises both an emotional aspect

of affect balance – referring to the level of positive and negative emotions – and a cognitive

aspect of satisfaction with life, conceptualized as a sense of satisfaction with one's life

(Diener, 1984). The more cognitive aspect of well-being was measured with the ten-point

Life Satisfaction scale from the European Social Survey: "All things considered, how

satisfied are you with your life as a whole these days?" The item was scored on a ten-point

scale ranging from 0 (not at all satisfied) to 10 (completely satisfied). The mean score on the

Life Satisfaction scale was 6.54 (SD = 2.18).

The more emotional aspect of well-being was measured using a measure

adapted from the Happiness scale used in the World Values Survey: "Taking all things

together, how happy are you?" The item was scored on a ten-point scale (the original scale

uses a four-point scale), ranging from 0 (*not at all happy*) to 10 (*completely happy*). The

mean score on the Happiness scale was 6.86 (SD = 2.14).

In order to also assess both more short-term and more negative aspects of well-

being (for the independence of positive and negative aspects of well-being, see Huppert &

Whittington, 2003) we administered the Finnish translation (Juntunen et al., 2015) of the 5-

item Clinical Outcomes in Routine Evaluation-Outcome Measure (CORE-OM; Evans et al.,

2002). The scale, responses to which are based on the previous week, covers experienced

subjective well-being, life functioning, and problems/symptoms. Items were scored on a five-

point scale, ranging from 1 (*not at all*) to 5 (*most or all the time*). A sample is "I have felt

despairing or hopeless". The measure is problem scored (i.e., higher scores indicate more

symptoms). The mean score on the CORE-OM scale was 2.25 (SD = .78). Alpha reliability

was .82.

Chamberlain (1988) suggested a distinction between inner- vs. outer-focused

evaluations of subjective well-being. The above presented measures reflect both inner- and

outer-focused evaluation (e.g., life satisfaction or happiness judgments reflect not only

evaluations of the self, but also of one's life more generally; that is, how satisfied or happy

one is with one's work, family, or living environment). By contrast, self-esteem, referring to

a stable sense of personal worth or worthiness (Rosenberg, 1965), is primarily inner-focused.

Although self-esteem is positively associated with both affective (e.g., happiness) and

cognitive measures (e.g., life satisfaction) of well-being (e.g., Brown & Marshall, 2001;

Diener & Diener, 1995), its dependence on judgments of personal competence and

achievements has been argued to distinguish it from them (Lönnqvist et al., in press). We

measured self-esteem with the Single-Item Self-Esteem Scale (SISE) developed and

thoroughly validated by Robin, Hendin, and Trzesniewski (2001). Respondents were asked to

rate the statement "I have high self-esteem" on a ten-point scale, ranging from 0 (*not very*

true of me) to 10 (*very true of me*). The mean score on the SISE was 6.36 (SD = 2.48).

Economic status. *Objective income* (total household net income per month)

was measured with a single-item, tenpoint scale ranging from 0 (*under* 1000 *euros*) to 10

(*over* 5361 *euros*). *Subjective income*, that is, how well the respondent perceives he or she

gets by financially, was in turn assessed with a single-item, four-point scale ranging from 0

(*Very hard to get by on current incomes*) to 3 (*I live comfortably on current incomes*).

Childhood family income, as in the perceived financial status of one's childhood family, was

measured with a single-item, ten-point scale ranging from 0 (*poor*) to 10 (*rich*). Lastly,

expected or *estimated worth of inheritance* was assessed with a single-item, ten-point scale

ranging from 0 (*nothing*) to 10 (*considerable inheritance*).

Results

Factorial validity and reliability of the DIDS Confirmatory Factor analyses

(CFA) performed using AMOS 22.0 rejected the hypothesized five-factor model (df = 265, χ^2

= 1951.40, $p < .001$). An inspection of additional fit indices supported this conclusion. The

Comparative Fit Index (CFI) value was .85 and the Root Mean Square Error of

approximation (RMSEA) was .09; for acceptable model fit, these indices should be above .90

and below .08, respectively (Hu & Bentler, 1999). The modification indices (MI) were thus

used to examine how to improve model fit. Three pairs of items revealed especially high MIs:

(a) ruminative exploration items 14 and 15 ("I keep wondering which direction my life has to

take" and "It is hard for me to stop thinking about the direction I want to follow in my life"),

(b) identification with commitment items 17 and 18 ("My future plans give me self-

confidence" and "Because of my future plans, I feel certain about myself"), and (c)

exploration in depth items 21 and 22 ("I think about the future plans I already made" and "I

talk with other people about my plans for the future"). Within the first two pairs of items,

overlap in item content was assumed to cause the high MIs and the error terms were thus

allowed to correlate (Byrne, 2010). However, items 21 and 22 did not resemble each other

and allowing the errors terms to correlate did not sufficiently improve model fit.

The alpha coefficients were similar to those reported in most previous studies

(Luyckx, Schwartz, et al., 2008; Schwartz et al., 2011) on all but one dimension. *Exploration*

in depth only reached a score of .58 with item-total correlations of .22–.46. However, our

results mirrored those of Skhirtladze et al. (2016) as well as Zimmerman and colleagues

(2013) in the sense that items 21 and 22 correlated strongly with each other (inter-item

correlation .30), but only weakly with items 23–25 (inter-item correlations .28–.54). These

two sets of items thus seemed to reflect two different aspects of *exploration in depth*.

Following Skhirtladze et al. (2016) and Zimmerman et al. (2013) we named these two

dimensions *reflective exploration in depth* (items 21–22) and *reconsideration of commitment*

(items 23–25). The former refers to reflecting on already established commitments, the latter

to doubts about these commitments.

Table 1
Indices for the Six- and Five-Factor models, as well as the divergent four factor models in
which a pair of dimensions was collapsed into a single one ($N = 751$)

Model	df	χ^2	RMSEA	CFI
Six-Factor model	258	1348.02	.08	.90
Five-Factor model	265	1951.40	.09	.85
Four-Factor model: CM and IC	269	2046.09	.09	.84
Four-Factor model: ED and EB	269	2082.82	.10	.84
Four-Factor model: EB and RE	269	2777.89	.11	.77
Four-Factor model: ED and RE	269	2156.83	.10	.83

Note. CM = Commitment making, IC = Identification with commitment, EB = Exploration in
breadth, ED = Exploration in depth, RE = Ruminative exploration; df = degrees of freedom, χ^2
= chi square, RMSEA = root mean square error of approximation, CFI = comparative fit index

In conclusion, after allowing two pairs of items to covary and splitting
exploration in depth into two variants, our analysis revealed a six-factor model that provided
a statistically significantly better fit than the hypothesized five-factor model ($\Delta\chi^2$ = 603.38, *p*
< .000, ΔRMSEA = −.01, ΔCFI = +.05) or any alternative four-factor model. Table 1 gives an
overview of the fit indices of all the models that were tested. In all subsequent analyses we
used six dimensions.

Internal and external construct validity

First, internal construct validity was assessed by examining the zero-order
correlations between the six identity dimensions and comparing them with previous results
(e.g., Luyckx, Schwartz, et al., 2008; Skhirtladze et al., 2016). Table 2 shows the correlation
coefficients, including the variable age. The results were mostly in line with expectations and
previous results. The two commitment dimensions were positively interrelated as were all the
exploration dimensions, with the exception of *ruminative exploration* and *reflective
exploration in depth* being unrelated. Furthermore, whereas *reflective exploration in depth*
was positively associated with both commitment dimensions, these associations were the
opposite for *reconsideration of commitment*. Lastly, only *exploration in breadth*, *ruminative
exploration* and *reconsideration of commitment* were significantly interrelated with age,
decreasing with higher age.

Next, we assessed external validity by assigning the six identity dimensions
the role of predictor variables and inserting them in multiple regression analyses as one
block. Table 3 presents the regression coefficients, their Pearson counterparts as well as the
proportion of explained variance in the different adjustment variables. Although many
significant and strong zero-order correlations disappeared when controlling for the other
dimensions, the results were mostly expected. *Identification with commitment* and *ruminative*

exploration were strong predictors of all adjustment variables. In contrast, whereas

exploration in breadth and *reflective exploration in depth* predicted two of the variables,

commitment making and *reconsideration of commitment* had no predictive power of

adjustment.

Table 2

Zero-order correlations between the six identity dimensions including age ($N = 744$)

Dimensions	1	2	3	4	5	6
1. Commitment making	–					
2. Identification with commitment	.85**	–				
3. Exploration in breadth	.08*	.14**	–			
4. Ruminative exploration	-.56**	-.49**	.45**	–		
5 Reflective exploration in depth	.49**	.53**	.40**	-.06	–	
6. Reconsideration of commitment	-.25**	-.20**	.53**	.67**	.18**	–
7. Age	.07	.04	-.10*	-.15**	-.04	-.23**

* = p < .05; ** = p < .01

Table 3

Standardized betas and proportion explained variance for the regression analyses of adjustment ($N = 744$)

Variable	CORE-OM symptoms	Self-esteem	Happiness	Life-satisfaction
CM	-.06	.05	.06	.04
	(-.46**)	(.47**)	(.43**)	(.40**)
IC	-.19**	.31**	.24**	.20**
	(-.46**)	(.50**)	(.44**)	(.41**)
EB	-.12**	.15**	-.01	.00
	(.02)	(.10**)	(.00)	(.00)
RE	.35**	-.19**	-.20**	-.22**
	(.46**)	(-.34**)	(-.32**)	(-.31**)
ED$_a$	-.03	.02	.10*	.14**
	(-.21**)	(.27**)	(.27**)	(.28**)
ED$_b$	.08	-.08	.02	.03
	(.28**)	(-.18**)	(-.14**)	(-.12**)
Total R^2	.30**	.28**	.22**	.21**

Note. Pearson correlations in parentheses.

* = p < .05; ** = p < .01

Identity statuses

Since cluster analysis is sensitive to outliers (Norušis, 2009), we first removed 10 univariate (i.e., values of 3 *SDs* above or below the mean) and 7 multivariate outliers (i.e., individuals with high Mahalanobis distances). The status clusters were created through a two-step process similar to the one used in previous studies (e.g., Luyckx, Schwartz, et al., 2008; Zimmerman et al., 2013). First a hierarchical cluster analysis was conducted on the six identity dimensions using Ward's method with squared Euclidean distances. Three cluster solutions with either four, five or six clusters were evaluated and based on theoretical meaningfulness, parsimony, explanatory power, and resemblance with previous results, a total of 6 clusters were retained. In the second step, the initial cluster centers were used as nonrandom starting points in an iterative *k*-means cluster analysis. Figure 1 shows the final 6-cluster solution which explained between 49% and 72% of the variance in the identity dimensions. The *y*-axis represents *z* scores (i.e., standard deviations) which were interpreted as effect sizes. Similar to Cohen's *d* (1988), a SD of 0.2 is perceived as a small effect, a SD of .5 as a moderate effect, and a SD of 0.8 as a large effect.

Participants in the Achievement cluster (*N* = 121; 16.3%; 68.6% women) scored high to very high on both commitment dimensions and *reflective exploration in depth*, intermediate on *exploration in breadth*, and low to very low on *reconsideration of commitment* and *ruminative exploration*. Individuals within Foreclosure (*N* = 96; 12.9%; 65.6% women) were in turn characterized by only moderate high scores on both commitment dimensions and moderately low to very low scores on all explorations dimensions. Participants in the Moratorium cluster (*N* = 182; 24.5%; 60.4% women), on the other hand, had moderately high to high scores on all dimensions. In light of previous theory and results we labeled the cluster Searching Moratorium. In contrast, whereas individuals within Troubled Diffusion (*N* = 105; 14.1%; 65.7% women) scored very low on commitment and

intermediate to very high on exploration, Carefree diffused participants ($N = 35$; 4.7%; 51.4% women) scored intermediate to very low on all dimensions. Finally, the largest cluster to emerge in our study was a Moderate Carefree Diffusion cluster characterized by intermediate to low scores on all dimensions (N = 205; 27.5%; 51.2% women).

Figure 1

Z scores for the final cluster solution ($N = 744$)
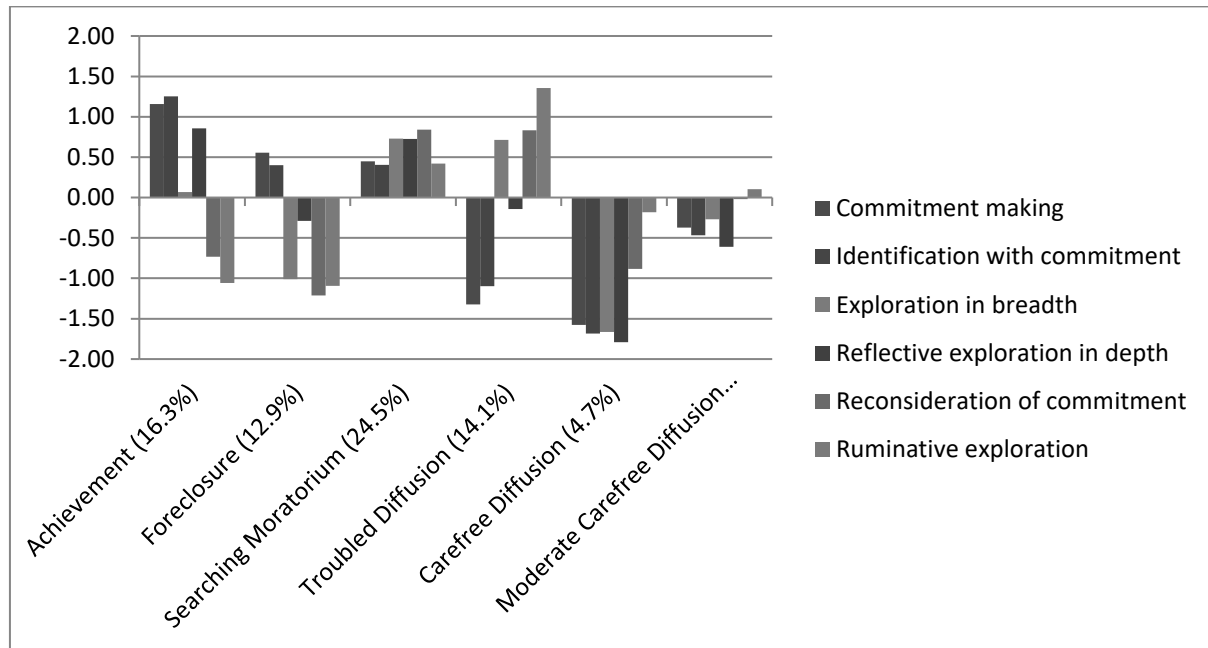
The distinction between *reflective exploration in depth* and *reconsideration of commitment* did not alter the general structure of the clusters but instead it added to their meaning and interpretation (see discussion). In general, *reflective exploration in depth* tended to follow the direction of both commitment dimensions whereas *reconsideration of commitment* mirrored *ruminative exploration*.

Our last step in the validation of the 6-cluster solution was to examine mean scores on the adjustment variables. We conducted a two-way MANCOVA where we checked for possible interaction effects between cluster membership and gender while controlling for age. Cluster membership and gender were treated as independent variables and the

adjustment variables as dependent variables. Table 4 shows follow-up multivariate analyses and *post hoc* cluster comparisons, whereas Figure 2 shows the results as *z* scores.

The six clusters differed statistically significantly from each another on all adjustment variables ($F(20, 1340.87) = 7.21$, $p < .00$; Wilks' $\Lambda = .71$; partial eta squared = .08). The results were consistent with previous research (e.g., Luyckx, Schwartz, et al., 2008). Whereas Achievement and Foreclosure scored lowest on CORE-OM symptoms and highest on self-esteem, life satisfaction and happiness, the results for the other clusters were more or less the opposite. Although gender showed a main effect on adjustment ($F(4, 404) = 5.07$, $p < 00$; Wilks' $\Lambda = .95$; partial eta squared = .05), no statistically significant interaction effect was found ($F(20, 1340.87) = 1.03$, $p = .42$; Wilk's $\Lambda = .95$; partial eta squared = .01).

As a last and additional move we compared the identity clusters in relation to economic status. A similar two-way MANCOVA as described above showed that the six clusters differed significantly from each other on all variables except *childhood family income* ($F(20, 1340.87) = 2.78$, $p < .00$; Wilks' $\Lambda = .87$; partial eta squared = .03). No interaction effect occurred ($F(20, 2415.45) = 1.17$, $p = .27$; Wilks' $\Lambda = .97$; partial eta squared = .01). Follow-up multivariate analyses and *post hoc* cluster comparisons are shown in Table 4. In general, subjects with Achievement, Foreclosure and Searching Moratorium status were marked by higher economic status than subjects within the diffused statuses, especially Troubled and Carefree Diffusion.

Table 4 MANOVA's and post-hoc cluster comparisons based upon Tukey HSD tests for the six clusters ($N = 744$)

Variables	Clusters						F-value	η^2
	Achievement	Foreclosure	Searching Moratorium	Troubled Diffusion	Carefree Diffusion	Moderate Carefree Diffusion		
Well-being:								
CORE symptoms	1.69a (.48)	1.86a (.67)	2.21b (.66)	2.87c (.85)	2.75c (.66)	2.39b (.71)	45.76***	.24
Self-esteem	8.05d (1.72)	7.39cd (1.87)	6.70c (2.00)	4.89b (2.65)	3.77a (2.97)	5.75b (2.34)	41.72***	.22
Happiness	8.18d (1.22)	7.88cd (1.66)	7.16c (1.63)	5.59ab (2.34)	4.83a (2.21)	6.34b (2.26)	37.91***	.20
Life satisfaction	7.69c (1.35)	7.57c (1.76)	7.01c (1.74)	5.21ab (2.38)	4.63a (2.24)	5.93b (2.26)	35.85***	.20
Economic status:								
Objective income	4.91bc (2.84)	5.53c (2.81)	4.84abc (2.97)	3.67a (2.65)	3.91ab (2.86)	4.23ab (2.76)	6.02***	.04
Subjective income	2.93c (.76)	2.76abc (.69)	2.79bc (.71)	2.45a (.81)	2.51ab (.85)	2.64abc (.80)	5.72***	.04
Childhood family income	5.54b (2.26)	5.09ab (2.14)	5.27ab (2.11)	4.91ab (2.21)	4.43a (2.13)	5.07ab (2.28)	1.91	.01
Estimated worth of inheritance	4.09b (2.56)	3.45ab (2.10)	3.96b (2.39)	3.21ab (2.70)	2.77a (2.39)	3.33ab (2.24)	4.08**	.03

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

** = $p < .01$, *** = $p < .001$

Figure 2

Psychological functioning by identity cluster
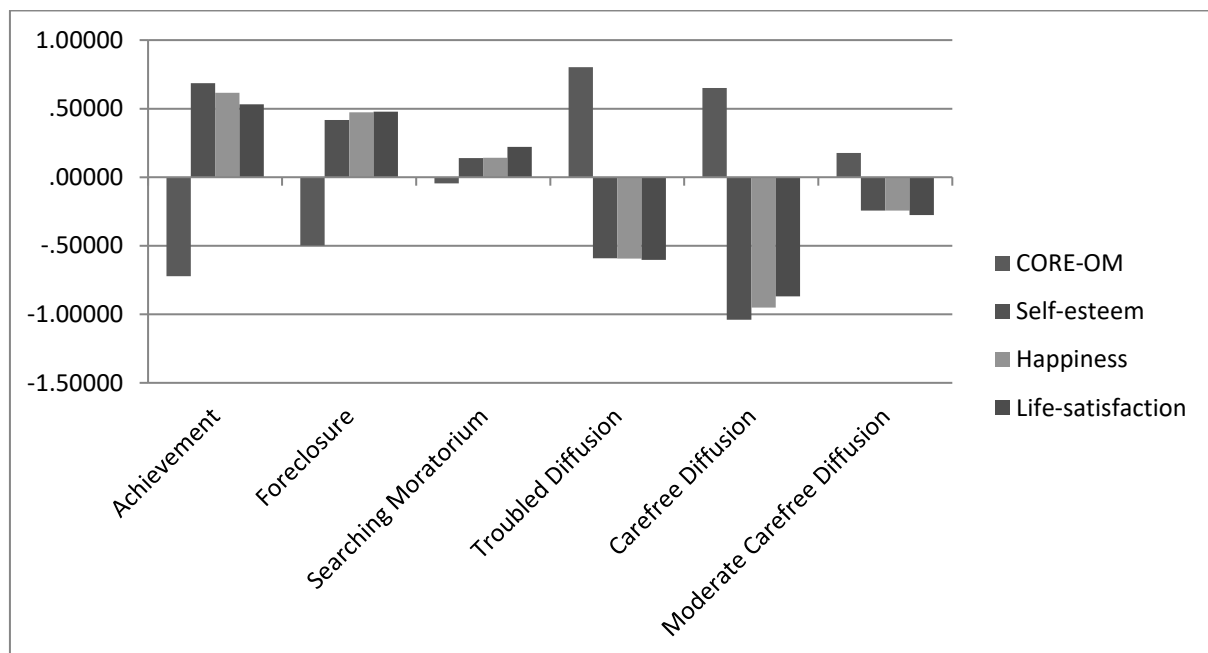
Discussion

Provided that societal structures guide identity formation, the focus of our study was to examine how Finnish young adult's identity formation is played out in comparison with other western and non-western young adults. Our primary concern was with whether a late modern society of increasing uncertainty and poor employment prospects diffuses young adults and prolongs their identity development and how the Finnish societal context may count for this development. More specifically, our first objective was to examine the psychometric properties and establish convergent validity of Luyckx's five-dimensional identity model (Luyckx, Schwartz, et al., 2008) among Finnish-speaking young adults. Our second objective was to derive identity statuses through cluster analysis and compare them with previous results. The last objective was to examine the results from a societal and cross-cultural perspective. The study yielded many expected and some unexpected results but also showed features unique to a Finnish context.

First, CFA indicated that the five-factor model did not have an acceptable fit and therefore the DIDS could not be validated as such in this Finnish sample. However, by modifying the factor structure according to modification and reliability indices, our data supported a six-factor model similar to the one found recently in French-speaking and Georgian samples (Skhirtladze et al., 2016; Zimmerman et al., 2013). The inter-item and item-total correlations as well as internal consistencies and correlations of the scales suggested that *exploration in depth* consisted of two different aspects of identity exploration. The first form – *reflective exploration in breadth* – correlated strongly and positively with both commitment dimensions and indicated thus a careful evaluation of current commitments, supporting and strengthening them. In contrast, the second form – *reconsideration of commitment* – correlated negatively with both commitment dimensions, indicating thus a critical questioning of commitments, weakening identification with them.

Further, in line with previous studies (Luyckx, Schwartz, et al., 2008; Zimmerman et al., 2013), *exploration in breadth* supported both forms of commitments while *ruminative exploration* did the opposite. All in all, even though the exact five-factor model was disconfirmed, our results were essentially in line with theory and previous studies (Luyckx, Schwartz, et al., 2008; Zimmerman et al., 2013) and fitted nicely a more recent, among French-speaking and Georgian young adults found six-factor model of the DIDS (Skhirtladze et al., 2016; Zimmerman et al., 2013).

Regarding age, *exploration in breadth*, *ruminative exploration*, and *reconsideration of commitment* decreased with higher age, as expected. However, a surprising result was that commitments and identification with them did not correlate with age. This runs against classical theory (Erikson, 1950, 1968) since commitments would be expected to increase and strengthen with higher age. That is, in the present study older participants had decreased their exploration of different alternatives but at the same time they were no more committed or certain about their future plans than their younger colleagues. This might be indicative of an adaptation to uncertain employment and future prospects in accordance with theories of late-modern societies (Cote & Levine, 2002; Gergen, 1991). Individuals capitulate in front of endless demands of change and give up on finding stable goals to commit to.

Finally, the relationships between the identity processes and adjustment variables provided further evidence for the convergent validity of the DIDS. Both commitment dimensions showed strong and significant positive zero-order correlations with all adjustment variables but only *identification with commitment* significantly predicted adjustment. This was expected, because commitments per se do not entail certainty – it seems to be only deeper identification with commitments that brings stronger well-being. Also as expected, *exploration in breadth* predicted negatively CORE-OM symptoms and positively

Self-esteem when controlling for the other dimensions. The results for *reflective exploration in depth* were similar, but this dimension predicted positively Happiness and Life satisfaction, and not CORE-OM symptoms or Self-esteem. Based on the present data it is not possible to say why these two exploration dimensions predicted different aspects of well-being; however, this may be an important topic for future identity research.

Further, *ruminative exploration* predicted positively CORE-OM symptoms and negatively the other variables. These results were expected, because *ruminative exploration* tends to be experienced as inefficient and endless; thus, it is not surprising that it is connected to heightened distress. *Reconsideration of commitment,* in turn, showed strong and significant negative zero-order correlations with well-being but failed to predict any of the adjustment variables when controlling for the other identity processes. Thus, when considered alone, *reconsideration of commitment* resembles *ruminative exploration* in that it goes hand in hand with weak commitments. Considered together with the other identity processes, however, it loses this link due to its collinearity with the other dimensions. This result is, nonetheless, in accordance with Luyckx, Schwartz, et al. (2008) study where a similar connection was observed between *exploration in depth* and well-being.

Overall, our results are in line with two recent studies by Skhirtladze et al. (2016) and Zimmerman et al. (2013) and show that there are several, both adaptive and maladaptive sides to identity exploration. Besides *exploration in breadth* being adaptive and *ruminative exploration* being maladaptive, *exploration in depth* emerged in our study as two different identity processes with different adjustment outcomes. Our regression results showed that an open and reflective evaluation of current commitments is truly possible and desirable in terms of well-being, as was originally theorized by Luyckx et al. (2006). But *exploration in depth* may mean doubtful reconsideration of commitments as well, accompanied by either higher or lower distress. The direction of this process and its felt

necessity probably determines how the process is experienced. This distinction may prove important, for instance, in counseling when determining the current identity situation of clients, whether and how they are exploring different options. The six-dimensional model, however, demands further attention and development in future research, especially when it comes to expanding on both aspects and scales of *exploration in depth*.

With respect to our second objective of the present study, based on cluster structure patterns, a total of six statuses were identified. All of them overlapped substantially with status clusters found in previous studies (e.g., Crocetti et al., 2008; Luyckx, Schwartz, et al., 2008; Schwartz et al., 2011) with some unique differences specific to our Finnish sample. Achievement was, as expected, the most committed cluster and individuals in this cluster had highest well-being. Foreclosure showed a similar pattern but participants in this cluster scored lower on both identity and well-being dimensions. In contrast to the results concerning participants in Achievement and Foreclosure clusters, Troubled and Carefree Diffusion participants were the least committed and displayed lowest psychological well-being. The major difference between these two clusters/statuses is that Troubled diffused individuals are anxiously exploring alternative future plans, while Carefree diffused individuals do not seem to care or ruminate over their current situation. The label *Carefree* may be somewhat misleading, however, because individuals with the Carefree status occasionally score equally low in well-being as individuals within the Troubled Diffusion status (e.g., Schwartz et al., 2011; Skhirtladze et al., 2016); this was also the case in the present study. In fact, in our study, individuals with Carefree Diffusion scored significantly lower on self-esteem than Troubled diffused individuals. Therefore, Carefree individuals may be unconcerned with planning for their future but they are definitely not carefree as in enjoying their circumstances.

The last cluster that emerged in our study was not the Undifferentiated cluster as in previous studies but instead a form of Moderate Carefree Diffusion. This cluster showed an equivalent but weaker profile than Carefree diffusion on all identity and well-being dimensions. Nonetheless, all diffused subjects seem to either lack knowledge and/or skills to find something more stable to commit to or they are simply unmotivated to do so.

The Moratorium cluster that emerged in our sample was more of the "Searching" type. In contrast to Ruminative Moratorium, Searching Moratorium is characterized by higher degrees of commitment and well-being and lower *ruminative exploration.* As discussed in previous studies (Crocetti et al., 2008), individuals within the Searching Moratorium have already made some commitments but they are still unsatisfied and therefore reconsidering them.

The emergence of six (as opposed to five) dimensions in the present study shed new light on the meaning and interpretation of exploration in relation to the identity statuses. For instance, the Searching Moratorium cluster scored higher on *reconsideration of commitment* than on other exploration dimensions, marking the independence of the process and its centrality to individuals doubtful of their existing commitments. This point to the in-between status of Searching Moratorium (Crocetti et al., 2008). It suggests that these individuals are not certain enough about their future plans to think positively of them or share them confidently with others. Instead they ponder, reconsider, and ask others for their opinion. Foreclosed subjects, in turn, showed much higher *reflective exploration in depth* than other forms of exploration. This indicates that they are relatively disinterested in exploring new possibilities or reconsidering their current commitments but show a slightly higher willingness to process their future plans positively and discuss them with others.

Finally, examining the differences in economic status across the identity clusters revealed, somewhat unexpectedly, that individuals within the Carefree Diffusion

cluster had equally low incomes as those within the Troubled Diffusion cluster. According to previous research (Kraus, 2007) a state of Carefree Diffusion should be possible merely for individuals who can socially and economically afford it. That is, only those young adults with a broad social network, secure incomes, financial help from their parents, or otherwise a secured future, have the opportunity to wander around without commitments and worry. By contrast, low income individuals with less security would be expected to be forced to explore future plans in order to change their situation and status, as in the case of Troubled Diffusion. However, the Carefree diffused individuals in our study, were worst off in terms of adjustment and income but they were still unconcerned with planning their future. From this perspective, apathetic "Carefree" diffused individuals are in fact less adaptive than Troubled diffused individuals and may therefore constitute a greater concern for future society.

Regarding our last objective, that is, viewing our results specifically from a societal and cross-cultural perspective, it is worthy of note that only one quarter of our participants (those with Achievement or Foreclosure status) seemed certain about their future plans and were doing well in terms of psychological adjustment. Skhirtladze et al. (2016) got in fact similar results among Georgian young adults but their sample consisted of younger participants. That is, our comparably old Finnish sample of young adults was mostly not committed yet but rather held a more open, exploring stance. The prevailing uncommitted state of this sample was reflected also in age differences – higher age entailed a decrease in exploration without an increase in commitments – as well as the fact that Moderate Carefree Diffusion was by far the largest group.

The finding according to which a very large proportion of Finnish young adults are not committed in terms of identity compared especially to Italian, American, and French-speaking young adults (Crocetti et al., 2011; Schwartz et al., 2011; Zimmerman et al., 2013) is quite a remarkable result. It corresponds with theories of late-modern, market-

driven, and highly individualistic societies, in which flexibility is preferred over stability

(Gergen, 1991; Sennett, 1998). In other words, changes in the private (e.g., family

relationships, gender) and public sphere (working life, communication) during the last

decades have brought individualistic values of constant self-realization and transformation to

the fore. Therefore, according to some accounts (Gergen, 1991; Giddens, 1991) the current

climate is more suitable for individuals who openly and continuously explore different life

options without ever really committing themselves. Nonetheless, to what degree this

prolonged identity crisis is freely chosen and openly embraced is debatable. For instance,

especially during the current European economic crisis uncertain employment prospects

might force young adults to avoid commitments more than before, keeping them constantly

ready to change direction. Identity development is therefore restrained more by structural

necessities than own choices (Yoder, 2000). This is seen notably in the moderately low

committed Moderate Carefree Diffusion status as well as in the Searching Moratorium type.

Individuals with the Searching Moratorium status are, already somewhat firmly committed,

but they still reconsider commitments with rumination. The present results showed that all

individuals with Diffusion statuses, also those with the Carefree Diffusion status, had

relatively poor psychological wellbeing. This shows that lacking stability and direction in life

comes with a price. Hence, growing confusion among young adults may be a coping strategy

in the current uncertain and constantly changing circumstances. However, this strategy does

not appear to be chosen freely and happily. Based on our study it is, nonetheless, impossible

to tell whether the broad and inclusive Finnish social security system actually amplifies and

prolongs diffusion among young adults or protects them from even worse consequences of

poor future prospects.

       Lastly, at the other end of the spectrum are the Achieved individuals, highly

committed and thriving in terms of well-being. However, contrary to several previous

findings (Luyckx, Schwartz, et al., 2008; Schwartz et al., 2011; Zimmerman et al., 2013) but similar to Skhirtladze et al. (2016), the Achievement cluster showed only an intermediate degree of *exploration in breadth*. That is, highly committed Finnish young adults are not simultaneously able or willing to consider alternative options. This might in fact also be a defensive maneuver in the same uncertain context. Those who are committed and satisfied do not explore other options since it jeopardizes their highly appreciated accomplishment of being committed in a situation where the society itself appears to be in a perpetual change.

The present study had some limitations. First, the cross-sectional design used did not let us examine identity development as such, that is, how the identity processes evolve and change with time. Developmental processes can only be examined through longitudinal studies (Meeus, 2011). Second, our sample was not randomly chosen, but instead consisted of young adults registered to the web panel we used. However, our sample was fairly balanced in terms of gender, age, income, and life context. Finally, even though our results regarding the prevalence of uncommitted and diffused individuals may be explained with economic factors it is still unclear how exactly the Finnish welfare state moderates this connection. The inclusion of societal factors in the analysis of identity formation therefore most certainly needs more scrutiny.

Conclusion

In the present study the DIDS proved a useful instrument for the assessment of identity processes and their associated identity statuses in a Finnish-speaking context. Although the hypothesized five-dimensional model of the DIDS could not be fully confirmed our results were strongly in line with previous conclusions (Luyckx, Schwartz, et al., 2008; Schwartz et al., 2011) and in fact supported a more recent six-dimensional model proposed by Zimmerman et al. (2013) and Skhirtladze et al. (2016). By splitting *exploration in depth* in two dimensions – *reflective exploration in depth* and *reconsideration of commitment* – the

DIDS showed appropriate internal consistency as well as factorial, internal, and external validity.

Overall, Finnish young adults were fairly uncommitted and uncertain about their future plans in our study. Identity exploration decreased with higher age but no increase in commitments was detected. In addition, the distribution of identity statuses showed that identity diffusion was unexpectedly prevalent among our subjects. How this affects commitments and well-being in the long run demands further attention because large-scale identity diffusion, indecision, and poor well-being among young adults might demand closer attention in terms of better intervention resources and methods.

Finally, due to the broad background of our subjects in terms of education, income, and life context, it is likely that the results are generalizable to Finnish young adults aged 18–29. Hence, we call for replications of these results in the future; especially the six-factor structure observed here needs further attention. In addition, in order to capture the interaction of identity processes and socioeconomic factors, longitudinal studies of identity status development in different contexts are crucial.

Disclosure statement

No potential conflict of interest was reported by the authors.

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II

IDENTITY PROFILES AND DIGITAL ENGAGEMENT AMONG FINNISH HIGH SCHOOL STUDENTS

by

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Identity profiles and digital engagement among Finnish high school students

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Abstract

Developing a stable personal identity is considered a more precarious task in today's society than hitherto. Skilful digital engagement may, however, constitute a valuable asset in necessary identity exploration and commitment. Applying a person-oriented approach, we examined for the first time how identity profiles are associated with digital engagement, operationalized as digital competence, gaming seriousness, type of internet activity and excessive ICT use. After controlling for gender, life satisfaction and parental SES, this study of a Finnish high school sample (N = 932) revealed that adolescents with future commitments and some exploration of options (achievement, searching moratorium) were the most advanced in digital skills and, in the former case, least prone to excessive ICT use. By contrast, adolescents desperately trying to solve the identity task (ruminative moratorium) scored highest on friendship-driven internet activity and excessive ICT use, whereas diffused individuals had the weakest digital competence. No differences between the profiles emerged regarding gaming and interest-driven internet activity. The results suggest that the digital world and related devices are purposeful tools for shaping and maintaining healthy identity commitments.

Keywords: Identity formation; identity status; person-oriented approach; digital engagement

Introduction

Constructing a healthy identity is currently considered a pressing research issue owing to increasingly uncertain and contingent societal circumstances (e.g., Mastrotheodoros & Motti-Stefanidi, 2017). Simultaneously, youth come of age in a digitalized and interconnected online world that offers them unprecedented access to information, knowledge sharing and peer support. Finnish education is globally known for its equity and high quality (Niemi, 2014; Organisation for Economic Co-operation and Development [OECD], 2015). Acknowledging the demands of 21st century societies and issues related with digital inequalities, the Finnish government and authorities have recently invested massively in digitalisation of schools, learning and improvement of students' digital skills (City of Helsinki, 2016; Ministry of Education and Culture, 2016). It remains to be seen if these tools and new opportunities will help adolescents explore their future options and make decisions, that is, to find a stable identity. In this study, we examined whether identity profiles of commitment to and exploration of future plans are linked to digital engagement among Finnish high school students.

Identity Development

Erikson (1950; 1968) perceived identity consolidation as the core developmental task of adolescence. Identity refers to a sense of purpose and continuity which arises out of commitments to ideals, roles and future plans. Maintaining identity is essential for psychological well-being throughout life because confusion over one's future

direction may thwart decision making in subsequent life challenges, placing further personal and social development on hold.

Empirical research on identity formation in the Eriksonian framework has largely focused on measuring the extent to which an individual has explored alternatives and made commitments in different life domains (Marcia, 1966; 1993). By crossing the two dimensions, individuals can be assigned one of four statuses indicating the outcome of identity formation. Individuals within the *achievement* status have already explored different options and made commitments. The *moratorium* status represents the transitional crisis, consisting of individuals who have not yet reached commitments but are currently exploring alternatives. In contrast, individuals who have already made commitments without prior exploration are assigned the *foreclosure* status. Lastly, the *diffusion* status consists of individuals who lack both exploration and commitments. Accumulated research has shown the statuses to be differently related to various external correlates such as personality characteristics, cognitive processes and interpersonal behaviour (Kroger & Marcia, 2011). Most importantly, identity-achieved individuals have consistently scored highest in terms of psychological well-being, while subjects in diffusion and moratorium have the lowest scores.

Although Waterman (1982) suggested a developmental trajectory between the statuses in which adolescents progress from diffusion to either foreclosure or through moratorium to achievement, recent longitudinal studies have shown identity status development to be much more stable, non-linear and dependent on demographic variables than previously thought (Fadjukoff, 2007; Kroger, Martinussen, & Marcia, 2010; Meeus, van de Schoot, Keijsers, & Branje, 2012). That is, in addition to progression between the statuses over time, great stability and some regression have also been observed. Further, although gender differences have been very small or non-existent (e.g., Kroger, 1997; Schwartz et al., 2011), other contextual factors such as prior school success, parental SES and larger economic circumstances play a significant role in the development and distribution of identity statuses (Fadjukoff, 2007; Fadjukoff, Kokko, & Pulkkinen, 2010; Mannerström, Hautamäki, & Leikas, 2016). For instance, adolescents with highly educated parents are more likely to reach the achievement status. Similarly, the number of diffused individuals increases during economic recessions. Taken together, achieving identity does not seem like a fixed end-target. Instead, identity appears as a continuous, context-dependent and multidirectional process that demands ceaseless reclaiming.

Current multidimensional process-models, such as that proposed by Luyckx, Goossens, Soenens, and Beyers (2006), better capture the iterative and dynamic nature of identity formation. They maintain that identity consolidation consists of two *formation* processes – exploring different alternatives and making commitments (i.e., *exploration in breadth* and *commitment making*) – and two *evaluation* processes, which involve how current commitments are reflected upon and identified with (i.e., *exploration in depth* and *identification with commitment*). Later, a fifth process, *ruminative exploration*, was added to the model (Luyckx et al., 2008). In contrast to the adaptive exploration processes, ruminative exploration signifies a dysfunctional type of brooding over different alternatives that interferes with commitment-making processes. Rumination is an important factor in the assessment of identity formation in current western societies because youth are increasingly prolonging exploration or avoiding commitments altogether (Arnett, 2004). It has been suggested that settling on a future direction and gaining a sense of identity are more difficult than before (Côté, 2006; Elliott, 2015). Seemingly endless but unequal and -structured life path opportunities alongside a market-driven spirit of constant re-invention and flexibility on all levels of society increase uncertainty and rumination regarding the future. Counteracting these tendencies increasingly demands the capacity of personal agency in decision-making and life path choices (Schwartz, Côté, & Arnett, 2005).

To test their dual-cycle model (Luyckx, Goossens, & Soenens, 2006), Luyckx and colleagues (2008) developed the Dimensions of Identity Development Scale (DIDS), commonly used within the identity domain of general future plans, but also applicable within domains such as intimate relationships and work (Luyckx, Seiffge-Krenke, Schwartz, Crocetti, & Klimstra, 2014). The DIDS allows both a variable- and person-oriented approach (Crocetti & Meeus, 2015). In the former case, the relations between exploration and commitment identity dimensions and some external variables are evaluated. In the latter, participants are first assigned to one of the identity statuses through cluster analyses (CA) or latent profile analyses (LPA) that combine measures of exploration and commitment, then the associations between identity statuses and external variables are evaluated.

In a wide range of studies across different contexts, the DIDS has repeatedly produced 5-6 different clusters or groups, four similar to Marcia's original statuses (e.g., Luyckx et al., 2014; Mannerström et al., 2016; Schwartz et al., 2011; Zimmerman, Lannegrand-Willems, Safont-Mottay, & Cannard, 2013): achievement (scoring high on all dimensions except low on ruminative exploration), foreclosure (labelled early closure by Meeus, van de Schoot, Keijsers, Schwartz, & Branje, 2010, scoring moderately high on both commitment dimensions but low on all exploration dimensions), moratorium (scoring low on both commitment dimensions and high on all exploration dimensions), and diffusion (scoring low on all dimensions except moderate to high on ruminative exploration). New statuses identified with the DIDS include *searching moratorium* (moderately high scores on all dimensions, see Crocetti, Rubini, & Meeus, 2008; Schwartz et al., 2011), *carefree diffusion* (scoring low on all dimensions), and *undifferentiated* (intermediate scores on all dimensions: Luyckx et al., 2008). Studies with the DIDS have shown that the identity statuses differ significantly on several measures of psychosocial functioning (Luyckx, Duriez, Klimstra, & De Witte, 2010; Schwartz et al., 2011). In general, subjects in the achievement status are best adjusted, followed by those in foreclosure, searching moratorium, carefree diffusion, undifferentiated, and diffusion.

In summary, exploring and committing to future life paths yields certainty, direction and predictability, that is, a sense of identity that is fundamental for psychological well-being. Identity development does not, however, follow a normative and linear track as previously assumed; instead, it is a ceaseless process dependent on contextual factors. This has important societal implications, because actively supporting identity consolidation among youth means supporting psychological well-being, which in turn is beneficial for health and economy on a national level. In this task, digital skills, social networking and gaming may offer new means and resources for exploring and establishing identity commitments. In this paper we use the term identity *profiles* synonymously with *statuses*.

Digital Engagement

Information and communication technology (ICT), the internet and social media offer constant interaction with other people and information. Digitally mediated social interaction has given rise to new ways of living, working, communicating and learning (Curran, Fenton, & Freedman, 2016; Schwab, 2017). We employ *digital engagement* as an umbrella term for the digital practices and competencies that are central to adolescents' everyday lives, considered essential for social integration in the 21st century knowledge society, and increasingly integrated in Finnish educational institutions (Niemi, Kynäslahti, & Vahtivuori-Hänninen, 2013). For instance, interacting with others over the web, sharing knowledge, and mastering computer programs for creating, designing or programming artefacts all help develop the digital literacy (cf. digital capital) demanded by future labour markets (Gallardo-Echenique, de Oliveira, Marqués-Molias, & Esteve-Mon, 2015; Trilling & Fadel, 2009).

However, digital practices and engagement are not uniform across youth but instead vary in form and magnitude. For instance, Ito et al. (2009) distinguish between friendship-driven (keeping up peer relations) and interest-driven (learning about a specific object) motivations in digital engagement. Friendship-driven activity includes social networking, entertainment and gaming, whereas interest-driven activity consists of creative, artistic and goal-oriented media use ranging from searching for information to creating and sharing text, videos, websites and serious ICT expertise. Several studies show that the majority of adolescents in many western countries engage primarily in friendship-driven activities (Eynon & Malmberg, 2011; Ito et al., 2009; Kennedy, Judd, Dalgarno, & Waycott, 2010; van den Beemt, Akkerman, & Simons, 2011).

Furthermore, digital engagement is bound up with structural inequalities in gender, ethnicity and social class, with adolescents from wealthier families having better access to ICT, digital competence and more interest-driven activities than their less privileged peers (Heinz, 2016; Robinson et al., 2015). Additionally, boys are more into interest-driven activities and gaming and have better ICT skills than girls. Robinson and colleagues (2015) worry that digital inequalities and related engagement produces significant micro- and macro-level outcomes, most notably different life opportunities and trajectories. The danger is that digital divides may deepen social and economic divides. Thus, current research has shifted to focus on the outcomes of different forms of digital engagement for different groups.

For instance, we currently know that social networking and gaming are associated with both positive and negative socio-psychological outcomes. In the former case, depending on game type and genre, gaming can increase prosocial behaviour and civic engagement as well as cognitive and visual-spatial skills (Anderson, 2014; Gabbiadini

& Greitemeyer, 2017; Green, Gorman, & Bavelier, 2016; Greitemeyer & Mügge, 2014). In the latter case, extensive gaming has been associated most notably with low life satisfaction and addictive behaviours (Gentile, Coyne, & Bricolo, 2013; Manago, 2015; Prot, Anderson, Gentile, Brown, & Swing, 2014 for reviews). Extensive gaming may push aside other enriching activities and simultaneously operate as a form of escapism, masking psychosocial problems such as low life satisfaction (Kardefelt-Winther, 2014; Przybylski, 2014).

Thus, socio-digital participation is not a passive activity. Instead, it deeply penetrates social and cognitive development (Ito et al., 2009; Manago, 2015). How we use digital tools simultaneously reflects and shapes ways of communication and learning, meaning that more demanding digital engagement reflects more complex knowledge practices (Hakkarainen, 2009). In turn, mastering digital tools and producing and sharing knowledge digitally is now commonly perceived as a critical resource for success and social integration in the 21st century knowledge society (Gallardo-Echenique et al., 2015). In other words, digital engagement profoundly mediates social life and coping skills in society, giving it a meaningful role in adolescent development (Ito et al., 2009; Manago, 2015; Przybylski & Weinstein, 2017).

Identity Development and Digital Engagement

Given that digital technology influences how we develop socially and cognitively, it provides new opportunities for and challenges to identity consolidation. For instance, the immense informational resources of social media, gaming and networking sites offer peer support and a sense of belonging, and they expand possibilities for exploring, reflecting and deciding upon different education and career alternatives (Manago, 2015). Similarly, customizing a social world representing one's circumstances and interests requires individual agency and responsibility for self-image, which may promote self-concept clarity (Gonzales & Hancock, 2008; Manago, 2015). Besides being a sounding board of self-reflection, digital engagement develops competence (cf. digital literacy) that in itself offers career paths in the 21st century working environments (Gallardo-Echenique et al., 2015; Trilling & Fadel, 2009). In our view, mastering skills such as online communication, knowledge sharing, programming and media creation offer career opportunities that dynamically influence self-image, personal preferences and choices of future direction. In this way, digital tools and the socio-digital world shape and enhance our capacities and may reinforce identity exploration and consolidation.

On the other hand, social networking also demands strategic self-presentation, which may lead to cognitive overload (Gentile, Twenge, Freeman, & Campbell, 2012; Misra & Stokols, 2012). A preoccupation with attractiveness leads to social evaluation, shallow relations with others and a dissatisfied attitude towards the self, delimiting autonomy and undermining identity (e.g., Haferkamp & Krämer, 2011). Similarly, gaming can interfere with identity development by becoming a substitute for real-world social contacts (Kardefelt-Winther, 2014). That is, the limitless identity possibilities offered in games may distort players' perceptions of themselves and their true capabilities. If real-world engagement with peers and exploration of future alternatives is neglected, sound commitments will be difficult to establish.

Despite the aforementioned studies that have connected digital engagement with social and cognitive development and suggest its importance for different aspects of personal identity, there are few empirical studies specifically targeting the links between digital engagement and identity processes. In fact, only recently Bacchini, De Angelis, and Fanara (2017), using the three-dimensional identity measure by Crocetti et al. (2008), showed that excessive gaming is negatively associated with commitments and positively related to reconsideration of commitments, indicating a relationship between uncertainty in identity domains and gaming. However, the study focused only on excessive gaming and lacked a person-oriented approach to identity, that is, combinations of identity processes were not examined. To our knowledge, there are no studies to date exploring in detail if diverse measures of digital engagement are related to identity statuses.

The Current Study

The aim of this study was to investigate possible links between identity statuses and digital engagement, operationalized as digital skills, gaming seriousness, friendship- and interest-driven internet activities and excessive ICT use. Employing a person-oriented approach, we used the DIDS domain of general future plans to classify adolescents into identity statuses.

Prior to examination of the main research question, we first created the identity profiles with LPA. In line with previous studies (e.g., Luyckx et al., 2008; Schwartz et al., 2011), we expected to find five or six of the following profiles: achievement, foreclosure, searching moratorium, ruminative moratorium, troubled diffusion, carefree diffusion and undifferentiated.

Our main research question was to determine if digital engagement is related to identity statuses, more specifically, latent profiles of commitment to and exploration of future plans. Based on previous studies and the assumed link between digital engagement and adolescent development (Bacchini et al., 2017; Ito et al., 2009; Manago, 2015), we hypothesized that individuals with high commitment profiles (foreclosure, searching moratorium, and achievement in particular), would show the highest friendship- and interest-driven internet activity, least preference for gaming, best digital skills and least excessive ICT use (H1). Achieved individuals already have future plans with which they are content. Because they have solved the task of direction, they feel no urge to escape confusion and social pressure by engaging in gaming or addictive digital activities. Instead, they display balanced digital engagement, that is, they network with others to share information and learn more about their commitments online while simultaneously building more advanced digital skills that further increase the possibility of them attaining future goals.

Based on existing research, we also hypothesized that subjects in the moratorium status would display intermediate levels of friendship- and interest-driven internet activity as well as digital skills, but also score highest on gaming and excessive ICT use (H2). These individuals have only weak or few commitments to discuss with others online and lack the motivation to develop better digital skills. Instead, high rumination provokes an escape into digital entertainment and addictive behaviours.

Finally, our last hypothesis was that diffused individuals would exhibit the least friendship- and interest-driven internet activities, the weakest digital skills and intermediate levels of gaming and ICT addiction (H3). The lack of future direction and relative disinterest in achieving one yield low motivation to engage in any socio-digital activities or development of related skills. Due to relatively low rumination, neither gaming nor general ICT addictive behaviours are present. We had no hypotheses for the other statuses, expecting them to fall somewhere in between the others. Finally, we controlled for gender, parental SES and life satisfaction in all the above analyses because previous studies have shown these to moderate digital engagement (Heinz, 2016; e.g., Przybylski, 2014; Robinson et al., 2015).

Method

Participants and Context

Finnish children have 9 years of comprehensive school, after which they, based on their academic achievement, can apply for either general upper secondary (high school; academic track) or vocational upper secondary education (vocational track). In 2012, every second student (50%) entered high school, and a little less than that enrolled in vocational school (42%: Official Statistics of Finland, 2016). Participants in this study were 932 second-year high school students attending 16 different schools in the Helsinki metropolitan area in 2014 (M_{age} = 17.1, SD = 0.29; 69% women). The majority (91%) were native speakers of Finnish or Swedish. The students completed the self-report questionnaire during school hours, participation was voluntary and informed consent was obtained from their parents.

Our sample consisted of somewhat more privileged and academically successful adolescents. The grade point average of the sample was 9 (range 4-10; SD = 0.66), which was significantly above the academic mean (M = 8.15, SD = 0.40) in the area. Further, parents' occupation displayed a bias towards higher SES among both mothers (N = 508) and fathers (N = 534; blue-collar = 9%/19%, lower white-collar = 43%/31% and upper white-collar = 48%/50%, respectively).

Measures

Identity. Identity formation and evaluation were measured using the short 11-item version of the Dimensions of Identity Development Scale [DIDS] previously applied by Marttinen, Dietrich, and Salmela-Aro (2016; see Luyckx et

al., 2008 for original full version). The DIDS comprises five subscales assessing commitment and exploration in the domain of general future plans: *Commitment making* ("I have decided on the direction I'm going to follow in my life"), *identification with commitment* ("My future plans give me self-confidence"), *exploration in breadth* ("I think actively about different directions I might take in my life"), *exploration in depth* ("I think about the future plans I already made") and *ruminative exploration* ("I worry about what I want to do with my future"). The short version of the DIDS contains two items per dimension, with the exception of three for ruminative exploration. The response scale ranges from 1 (*strongly disagree*) to 5 (*strongly agree*). Only for exploration in depth was the alpha score lower than .70 (i.e., .52), even if acceptable considering the number of items and moderate inter-item correlation (.35). Clark and Watson (1995) recommended that inter-item correlations fall within .15 and .50 for acceptable internal consistency. Means, standard deviations and reliability scores for all variables are found in Table 1.

Digital skills. Digital skills were measured with 9 items previously used by Hakkarainen et al. (2000) and Hietajärvi, Tuominen-Soini, Hakkarainen, Salmela-Aro, and Lonka (2015). Some items of the scale assess basic skills ("How competent do you see yourself in editing text documents") and others advanced skills ("How competent do you see yourself in programming"). The response scale ranges from 1 (*not at all*) to 5 (*very fluent*). A total score was computed for digital skills.

Internet participation. Students' internet activities were assessed with the 24-item Socio-Digital Participation Inventory (SDPi) employed by Hietajärvi, Seppä, and Hakkarainen (2017) and Moisala et al. (2017). We examined four subscales: *social networking* ("I update my "status" or share interesting things (pictures/links) with others in social media (Facebook, Whatsapp, Twitter), *knowledge-oriented* ("I search for new information about my hobbies or things I'm interested in"), *media-oriented* ("I share my own creations (text, videos, picture, music) with others") and *technology-oriented* ("I create websites for others"). Based on theory and interpretation, the subscales of *knowledge*, *media and technology-oriented* were further combined to represent a general *interest-driven* digital activities construct, whereas *social networking* represented *friendship-driven* activities. The SDPi uses a Likert scale for responses, ranging from 1 (*never*) to 7 (*all the time*).

Gaming seriousness. Seriousness of gaming was measured with six items, including "Gaming is a very important hobby for me". The response scales range from 1 (*completely disagree*) to 7 (*completely agree*).

Excessive ICT use. Compulsive and harmful digital technology use was assessed with a 5-item scale earlier employed by Salmela-Aro, Upadyaya, Hakkarainen, Lonka, and Alho (2017). A sample item reads, "Using ICT causes me to neglect my schoolwork". Responses range from 1 (*completely disagree*) to 5 (*completely agree*).

Life satisfaction. As a control variable, the 5-item Satisfaction with Life Scale (SWLS) was used to assess life satisfaction (Diener, Emmons, Larsen, & Griffin, 1985). One such item is, "I am satisfied with my life," and the response scale ranges from 1 (*completely disagree*) to 7 (*completely agree*).

Results

Preliminary Results

Examining the means in Table 1, the results suggest that friendship-driven activity was more popular than interest-driven activity, as previously found (e.g., Ito et al., 2009). However, serious gaming was not common among the participants. Moving on to correlations, gaming displayed no associations with the identity processes, whereas digital skills were negatively associated with ruminative exploration and positively with the other identity processes. Further, friendship-driven internet activity showed modest positive correlations with commitment processes and in-depth exploration. In contrast, interest-driven activity was positively associated with all three exploration processes. This distinction in internet activity was supported by the finding that friendship-driven activity was positively related to life satisfaction, whereas interest-driven activity was negatively related.

Table 1. *Descriptives, Internal Consistencies and Bivariate Correlations (N = 932).*

	1	2	3	4	5	6	7	8	9	10	11
1. Commitment making	–										
2. Identification with commitment	.67***	–									
3. Exploration in breadth	.21***	.25***	–								
4. Exploration in depth	.20***	.20***	.38***	–							
5. Ruminative exploration	-.54***	-.42***	.07*	.30***	–						
6. Life satisfaction	.29***	.28***	.07*	-.12**	-.35***	–					
7. Digital skills	.14***	.13***	.15***	.12***	-.08*	.04	–				
8. Gaming	-.04	-.04	.01	-.03	-.04	-.05	.18***	–			
9. Friendship-driven	.07*	.07*	.05	.10**	.03	.09**	.22***	-.17***	–		
10. Interest-driven	-.01	.01	.11***	.15***	.10**	-.15***	.43***	.08*	.33***	–	
11. Excessive ICT use	-.14***	-.09**	.01	.18***	.24***	-.20***	.10**	.24***	.12***	.20***	–
M	3.13	3.14	3.80	3.46	3.06	4.78	3.54	1.83	4.14	1.70	2.94
SD	1.18	1.11	.81	.93	1.10	1.32	.59	1.29	.93	.52	1.22
Cronbach's alpha	.93	.90	.72	.52	.84	.89	.79	.86	.71	.71	.82

Note: Pearson correlations used. *** = $p \leq .001$; ** = $p \leq .01$; * = $p \leq .05$.

Identity profiles. A confirmatory factor analysis indicated sufficient fit of the five-dimensional model (χ^2 (34, *N* = 922) = 313.743, *p* < .000, RMSEA = .09 (90% CI = .085-.104), CFI = .94, SRMR = .09). Next, groups of individuals with similar response combinations on the identity dimensions were identified through LPA (Mplus 7.31: see Bergman, Magnusson, & El-Khouri, 2003). The fit indices (sample-size adjusted Bayesian information criterion [SA-BIC], lower scores indicating better fit; Vuong-Lo-Mendell-Rubin [VLMR] nested model comparison, *p* value below .05, suggesting that the estimated model should be favoured over a model with one less profile), theoretical meaningfulness, parsimony and resemblance of profiles with previous results supported a five-profile solution. The LPA results are located in Table 2.

Table 2. *Information Criteria Values for the Different Profile Solutions.*

Number of profiles	SA-BIC	*p*VLMR	Entropy	Size of the latent profile group
1	12993.181			911
2	12279.562	.00	.75	433 478
3	12062.464	.00	.78	406 246 262
4	11924.617	.08	.74	240 122 253 296
5	*11783.891*	*.00*	*.75*	*186 144 322 138 121*
6	11723.482	.11	.75	159 287 104 118 100 143
7	11706.848	.18	.76	24 144 131 138 280 91 103
8	11686.587	.76	.75	81 114 132 171 208 61 93 51

Note: SA-BIC = Sample-size adjusted Bayesian information criterion; VLMR = Vuong-Lo-Medell-Rubin likelihood ratio test. Selected solution is in italics.

The identified profiles were Achievement (*N* = 186, 20.4%, high on both commitment dimensions and intermediate to low on all the exploration dimensions), Searching Moratorium (*N* = 121, 13.3%, high on all dimensions), Early Closure (*N* = 322, 35.4%, heightened commitment, intermediate scores on the other dimensions), Ruminative Moratorium (*N* = 138, 15.2%, low scores on both commitment dimensions and intermediate to high scores on all the exploration dimensions) and Diffusion (*N* = 143, 15.7%, low scores on all dimensions except a moderately high score on ruminative exploration). Figure 1 illustrates the profiles, with the y-axis representing *z* scores (i.e., standard deviations). In line with Cohen's *d* (1988), the *z* scores were interpreted as effect sizes, where a *SD* of 0.2 is considered a small effect, a *SD* of 0.5 a moderate effect and a *SD* of 0.8 as a large effect.
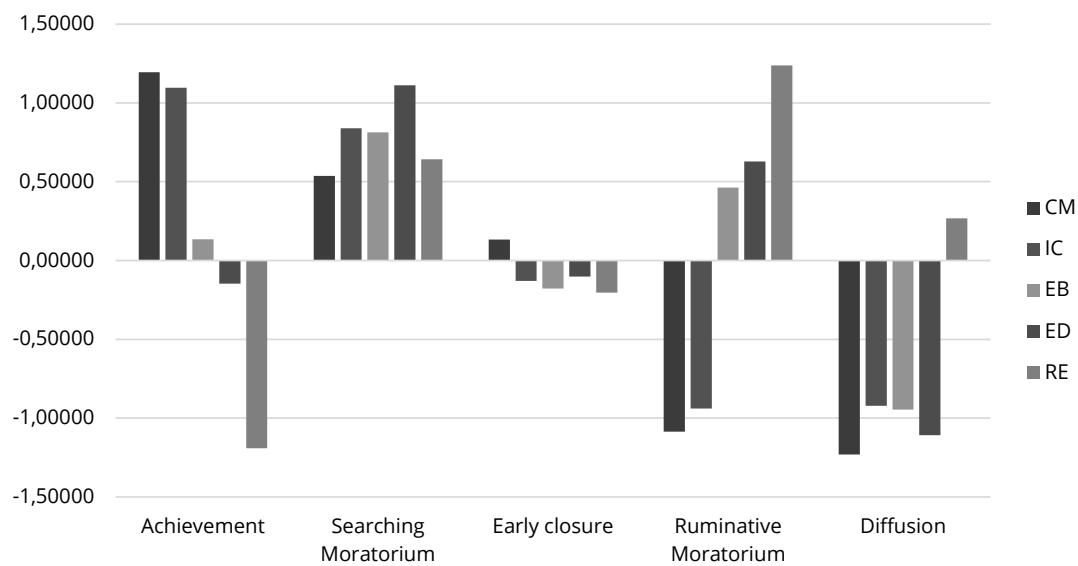
Figure 1. The final latent profile solution (*N* = 910). *Z* scores for commitment making (CM), identification with commitment (IC), exploration in breadth (EB), exploration in depth (ED) and ruminative exploration (RE).

Identity Profiles and Digital Engagement

A multivariate ANCOVA was conducted to analyse the main effect of identity profile on digital engagement while controlling for gender, SES and life satisfaction. Prior to the analyses, 12 univariate outliers with +-3 SDs were deleted from the variables assessing digital engagement. Moreover, because only half of our sample (*N* = 502) reported a parental SES value, we were not able to use SES as a covariate in the analyses of the entire sample. Instead we first performed a check in the SES-subsample to determine whether the results held with and without SES. Controlling for SES, gender and life satisfaction in the subsample, we found a main effect of identity profile (Wilks' λ = .90, F(20, 1612.830) = 2.604, p < .001; ηp2= .03). However, no interaction effect between identity and gender existed (Wilks' λ = .95, F(20, 1612.830) = 1.281, p > .05; η_p^2 = .01). The results held even with SES excluded. Thus, because SES had no effect on the analyses carried out on this sub-sample, we moved on to examine the whole sample with SES excluded from the analyses.

As we expected, we found a significant main effect of identity profile on digital engagement while controlling for gender and life satisfaction (Wilks' λ = .93, F(20, 2461.885) = 2.735, p < .000; η_p^2 = .02). More specifically, the main effects were very modest and only existed for digital skills, friendship-driven internet activity and excessive ICT use (see Table 3 for results). Regarding digital skills, the results supported all our hypotheses: adolescents in the achievement and searching moratorium statuses scored highest, diffused adolescents the lowest and those in ruminative moratorium had intermediate scores. In contrast, for friendship-driven activity, only our third hypothesis gained support, that is, diffused adolescents scored lowest. Unexpectedly, respondents in the ruminative moratorium scored highest, not the individuals in achievement. Furthermore, all our hypotheses gained support concerning excessive ICT use, as adolescents in achievement scored lowest, adolescents in ruminative moratorium highest and diffused ones intermediate. No interaction effect occurred with gender (Wilks' λ = .96, F(20, 2461.885) = 1.422, p > .05; Wilks' λ = .96; η_p^2 = .01).

Finally, but unrelated to our hypotheses, differences in interest-driven internet activity between the profiles became significant if gender was left out, with searching moratorium scoring significantly higher than achievement and diffusion (F = 2.965, p > .05; η_p^2 =.015). Similarly, gaming seriousness became significant if life satisfaction was omitted, with ruminative moratorium scoring significantly higher than achievement (F = 4.004, p > .01; η_p^2 = .021).

Table 3. *MANCOVA with Pairwise Comparisons for the Five Profiles and Digital Engagement (N = 757).*

Variables	Profiles					*F*-value	η²
	Achievement	Searching Moratorium	Early closure	Ruminative Moratorium	Diffusion		
Digital skills	3.67[b] (.67)	3.67[b] (.61)	3.56 (.55)	3.47 (.54)	3.36[a] (.52)	4.197***	.026
Gaming seriousness	1.76 (1.23)	1.68 (1.00)	1.87 (1.19)	1.91 (1.26)	1.88 (1.21)	2.147	.011
Friendship-driven activity	4.22 (.82)	4.16 (.96)	4.11 (.92)	4.24[b] (.88)	3.95[a] (1.00)	2.670*	.014
Interest-driven activity	1.63 (.45)	1.82 (.56)	1.71 (.49)	1.78 (.47)	1.63 (.40)	1.349	.007
Excessive ICT use	2.65[a] (.11)	2.98 (1.02)	2.97 (1.28)	3.41[b] (1.17)	2.93 (1.23)	3.046*	.016

Note: A profile mean is significantly different from another mean within the same row if they have different superscripts. A mean without a superscript is not significantly different from any other mean. Standard deviations are in parentheses. *** = $p \leq .001$; ** = $p \leq .01$; * = $p \leq .05$.

Discussion

Today, western adolescents face new social and economic uncertainties that make identity consolidation a prolonged and precarious task. In these circumstances, digital engagement may both advance and impede exploration of and commitment to future plans. Employing a person-oriented approach in this study, we set out to test whether adolescents' identity profiles are linked with their digital technology and media use.

First, latent profile analyses yielded five identity profiles identified also in previous studies (e.g., Schwartz et al., 2011). It is worthy of note that in this study the achievement profile showed relatively weak exploration of alternatives, as has been observed in other studies (Skhirtladze, Javakhishvili, Schwartz, Beyers, & Luyckx, 2016). In some contexts, if future plans are present, it might be more adaptive for individuals to remain completely focused on those plans rather than be open to alternatives. As with individuals in the searching moratorium, the risk of uncertainty is heightened rumination. Further, in this study, the exploration in depth dimension acted in a similar manner to ruminative exploration, which might explain the relatively low levels displayed by identity-achieved adolescents.

Second, but more importantly, our main hypotheses were only partially supported. Regardless of gender, life satisfaction and parental SES, identity profile had a significant effect on three out of five digital engagement indicators. As we expected, adolescents actively searching for and maintaining commitments (even with some rumination as in the case of searching moratorium) had the most advanced digital skills, whereas diffused individuals had the worst (i.e., communication, graphic design, video editing, programming). In line with Manago (2015), this suggests that for adolescents targeting specific goals, digital technology constitutes a purposeful tool for developing new necessary skills as well as practice for shaping future opportunities and eventually achieving those goals.

Furthermore, as we hypothesized, adolescents lacking commitments and desperately looking for a direction in life (ruminative moratorium) showed the greatest excessive ICT use, and achieved individuals showed the least. That is, when facing future uncertainty and experiencing rumination, adolescents also display distressed and compulsive digital technology behaviour that interferes with areas such as schoolwork and sleep rhythm. Although our measure did not discriminate between different forms of digital engagement (e.g., social networking, gaming), this finding is congruent with previous studies on how identity uncertainty and psychosocial problems are linked with addictive digital technology use (Bacchini et al., 2017; Kardefelt-Winther, 2014). Excessive ICT use was also negatively correlated with life satisfaction.

Interestingly, in this study, the finding that digital engagement was compulsive and anxious when more broad and ruminative identity exploration was present, implies that digital engagement was not pure escapism but instead an emotionally invested coping strategy for exploring and establishing commitments. This interpretation is supported by our other findings, namely, that identity profiles displayed no differences in gaming and that adolescents in ruminative moratorium, contrary to our hypotheses, scored highest on friendship-driven internet activity. Namely, friendship-driven activity was positively correlated with exploration in depth, that is, reflecting on chosen commitments. Accordingly, the results suggest that these adolescents use peer support in digital social networks to explore and reflect on possible future paths. Identity-diffused adolescents, on the other hand, are

disinterested in developing future plans and also lack interest in any forms of digital engagement. In other words, excessive digital engagement is not necessarily detrimental if the goal is or will be solving a task. Relatedly, and somewhat contrary to previous studies (e.g., Gentile et al., 2012; Haferkamp & Krämer, 2011; Misra & Stokols, 2012), in this study friendship-driven internet activity was positively associated with life satisfaction, indicating that social networking was not harmful but instead supportive of well-being.

Finally, unless covariates were excluded, no differences were found between the profiles regarding interest-driven internet activity and gaming. This was somewhat surprising in the former case because adolescents in achievement were expected to actively develop and maintain their future plans using the internet. This outcome was, however, most likely due to the relatively low level of exploration among adolescents in achievement. Overall, taking correlation patterns and profile differences into account, interest-driven activity was linked with exploration of future plans, as we originally theorized. In the case of gaming seriousness, although gaming was positively correlated with ruminative exploration and thus reflective of previous findings (Bacchini et al., 2017), our results suggested that well-being was a slightly stronger predictor of gaming than status. When controlling for life satisfaction, gaming emerged as a rather neutral activity with similar levels across statuses.

Other possible explanations for the non-existent and modest effect sizes include sample characteristics. As mentioned, for some time the Finnish government has already invested heavily into improving adolescents' digital skills. Consequently, Finnish adolescents are very similar in their digital skills and use. Further, the sample was rather biased in terms of parental SES and previous school success. In other words, large differences in digital engagement or exploration and commitment levels might not emerge in such a uniform sample (OECD, 2016). Unfortunately, we did not have access to results including adolescents on a vocational track or from more diverse backgrounds.

Overall, our results support previous theory and empirical findings on how digital practices inextricably reflect and shape social behaviour and development (Ito et al., 2009; Manago, 2015). In the present study, digital engagement was meaningfully linked with identity status. In contrast to a variable-approach (Bacchini et al., 2017), the person-oriented approach indicated that good digital skills, internet activity or excessive ICT use are not solely dependent on anxious exploration, but also on the levels of existing commitment (searching moratorium). Provided that identity is dynamic and multidirectional, our results suggest that digital engagement may add to positive identity development as much as firm future commitments may launch interest in connecting digitally with others and with information. Adolescents anxiously searching for a direction in life and trying to stabilize an identity use digital technology to a greater extent (also excessively) than before commencing this task or after completing it.

The present results have their limitations. First, our cross-sectional sample did not address causality or identity development but simply gave a snapshot of current identity status and related correlates. Second, and as discussed above, our sample contained only high school students from the Helsinki metropolitan region who had relatively high GPAs and higher SES background and voluntarily took part in the self-report study. In other words, differences that did or did not emerge between the profiles may, therefore, be an outcome of demographic or individual bias, ungeneralizable to other adolescents. Thus, we recommend that future research employ longitudinal data for causality evaluation, recruit a more diverse sample and, in addition, develop a multidimensional measure for excessive ICT use that better indicates which types or patterns of excessive behaviours (e.g., gaming, social networking) are detrimental and which are not.

Nonetheless, the present findings have policy implications. If digital practices can support positive identity formation, as our results indicate, then an important societal investment would be proper ICT education in schools. Schools should ensure that students are equally skilled in the use of digital technology and encourage identity exploration using digital devices. This would insure more equal life path opportunities, benefit adolescents' identity development and combat marginalization on a national level.

Conclusion

Our study is the first to demonstrate that identity statuses, that is, specific configurations of identity exploration and commitments, are related to digital engagement. In other words, how adolescents cope with identity issues is also reflected in their digital practices. More specifically, our results suggest that adolescents interested in

developing and maintaining future commitments are more engaged in digital technology than adolescents lacking exploration or commitments (i.e., diffusion). Commitments in combination with moderate exploration (i.e., achievement, searching moratorium) had the best digital skills, whereas those lacking commitments but high in exploration (i.e., ruminative moratorium) were most strongly into social networking but also showed excessive ICT use. In conclusion, the associations between identity profiles and digital engagement suggest that positive identity development can be supported by digital engagement and competence.

Acknowledgements

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III

ASSOCIATIONS BETWEEN IDENTITY PROCESSES AND SUCCESS IN DEVELOPMENTAL TASKS DURING THE TRANSITION FROM EMERGING TO YOUNG ADULTHOOD

by

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Associations Between Identity Processes and Success in Developmental tasks during the Transition

from Emerging to Young Adulthood

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Abstract

Little is yet known of how personal identity processes of exploration and commitment develop beyond adolescence and how they interact with developmental tasks of young adulthood. Employing the DIDS (The Dimensions of Identity Development Scale; commitment making, identification with commitment, exploration in breadth, exploration in depth and ruminative exploration) in a longitudinal sample of Finnish young adults (measurement at age 24 and 29; $N = 854$, 63% women), the results of this study suggested 1) that identity commitment and exploration levels, in general, decrease over time, 2) that success in developmental tasks but not sex moderate this development, and 3) that among developmental tasks, parenthood is the strongest predictor of changes in identity processes over time. The results support a view of personal identity as a dynamic process moderated by contextual factors beyond adolescence and have practical implications for social security provision in an increasingly precarious labour market. Political decisions that support young adults' trust in the future and a sense of continuity by strengthening different forms of social security are called for. A debate on values related to success is also needed to lessen the emotional costs of uncertainty.

Keywords: Identity development, identity processes, DIDS, developmental tasks, prolonged adolescence

Associations Between Identity Processes and Success in Developmental tasks during

the Transition from Emerging to Young Adulthood

Although Erikson (1950; 1968) viewed identity formation as an open-ended and life-long process merely peaking in meaning and intensity in adolescence, research building on Erikson has conventionally regarded identity as an enclosed and fixed task of adolescence (Marcia, 1993). As Arnett (2014) points out, 60 years of identity research has surprisingly poorly mapped the development and dynamics of identity beyond adolescence and simultaneously been unable to provide conclusive evidence for identity being a normative and exclusive crisis of adolescence. Given especially the vast socio-structural transformations in life path opportunities in western societies in recent decades, as observed in the postponement of traditional transitional events such as entering working life and having children (Arnett, 2006), there is reason to expect fluctuations and uncertainty in identity after adolescence. In this study we examined how identity processes in the domain of general future plans develop over two timepoints, between emerging and young adulthood, and how they are affected by success in four traditional developmental tasks of that time period, that is, leaving the parental home, marriage/cohabitation, becoming a parent and achieving an education-related full-time job.

Identity development as a task of adolescence and a life-long process

Erikson (1950; 1968) considered forming a sense of identity as the key developmental task of adolescence. Formulating future plans and making commitments regarding, for instance, ideals, values and goals, yields purpose and continuity – knowing where you are heading in life. This is critical for entering and coping with adult roles, tasks and responsibilities, that is, social integration and personal well-being throughout life. However, although identity issues are optimally settled already in adolescence, identity is never fully gained or finalized. A sense of identity is an open-ended process dependent on environmental changes and thus demands continuous reclaiming.

The core of identity research building on Erikson's theory ever since has employed the identity status model (Marcia, 1966; 1993). Based on the extent of exploration and commitment in various domains, adolescents are assigned a global identity status – indicating current progress in forming a firm identity. These include *diffusion* (neither exploration nor commitments), *moratorium* (exploration but no commitments yet), *foreclosure* (commitments without prior exploration) and *achievement* (commitments with prior exploration). Identity achieved individuals have generally been considered the most mature on several adjustment and well-being measures (Marcia, 1993). Although the occurrence of successive commitment-exploration cycles (so called MAMA-cycles; moratorium-achievement-moratorium-achievement) have been acknowledged within the identity status paradigm (Stephen, Fraser, & Marcia, 1992), nearly all research has focused solely on adolescence and assumed a rather linear developmental trajectory, with adolescents moving from diffusion towards achievement (see Waterman, 1982 for the Developmental hypothesis).

Only quite recently have studies produced a more diversified picture of identity formation, indicating strong individual differences in development. For instance, a meta-analysis of identity status research by Kroger, Martinussen and Marcia (2010) and a longitudinal study of 12-20-year olds by Meeus, van de Schoot, Keijsers and Branje (2012) found an increase in identity-achieved individuals and a decrease in diffused ones over time. However, while status progression seemed to occur, there was also some degree of regression as well as great stability, meaning no change in status. Besides, although sex differences are rare (Kroger, 1997), specific statuses seem to be related with antecedents such as previous school success, family SES (as in parents' education and occupation) and larger economic circumstances in society (Fadjukoff, 2007; Fadjukoff, Kokko, & Pulkkinen, 2010; Mannerström, Hautamäki, & Leikas, 2016). In the latter case, identity diffusion tends to increase during recession and decrease during economic recovery. Moreover, attention has been drawn to the fact that a sense of identity develops unevenly across different domains and should be studied accordingly (Schwartz, Luyckx, & Crocetti, 2015)

The most recent multidimensional identity models have underscored the iterative nature of identity formation (e.g. Crocetti, Rubini, & Meeus, 2008; Luyckx, Goossens, Soenens, Beyers, & Vansteenkiste, 2005). According to Luyckx's et al. (2006) dual-cycle model, identity consolidation consists of two *formation* (exploration in breadth and commitment making) and two *evaluation* processes (exploration in depth and identification with commitment); that is, different identity options are continuously explored and some commitments made. How strong the commitments grow emotionally or whether they are discarded depends, however, on the outcome of deeper reflection on them. In addition, commitments might be thwarted by a dysfunctional type of brooding over alternatives, called ruminative exploration (Luyckx et al., 2008). Rumination is considered a central challenge for contemporary youth struggling with seemingly endless opportunities of self-realization and labour market uncertainties (Côté, 2006).

A scale developed on the model (The Dimensions of Identity Development Scale [DIDS]: Luyckx et al., 2008) has shown consistent internal and external validity across culturally diverse samples such as American, Belgian-Dutch, Finnish, Georgian, Filipino, American and Turkish youth (Luyckx et al., 2008; Marttinen, Dietrich, & Salmela-Aro, 2016; Pesigan, Luyckx, & Alampay, 2014; Schwartz et al., 2011; Skhirtladze, Javakhishvili, Schwartz, Beyers, & Luyckx, 2016; Umit Morsunbul & Figen Cok, 2014). Despite the development of process-models viewing identity as more or less open-ended, research with these instruments have mostly focused on adolescents or convenience samples (young university students) and relative status changes (Arnett, 2014). For instance, Waterman suggested to examine mean-level changes in the identity processes over time to capture fluctuation in commitment and exploration processes (Waterman, 2015).

To date, only two studies have examined development of identity processes beyond late adolescence, with inconsistent results. In a cross-sectional study of nearly 6000 Belgians aged 14-30 (both students and employed/unemployed; M_{age} = 17.99), Luyckx, Duriez, Van Petegem and Beyers (2013) found, in line with the developmental hypothesis, that with higher age commitment

processes increased and exploration processes decreased. They also found that along with age exploration became more ruminative and was increasingly associated with depression, indicating anxiety induced by perceiving oneself as lagging behind societal expectations. In contrast, a cross-sectional study by Mannerström et al. (2016) of 751 Finnish young adults aged between 18 and 29 (both students and employed/unemployed; $M_{age} = 24.6$) found that while exploration of future plans weakened with higher age, as expected, no accompanying rise in commitment levels was observed. A further novel finding of the study was that nearly 50% of the sample were assigned a diffused status. The results were discussed within a framework of specific socio-cultural factors that discourage firm commitments. However, both studies lacked longitudinal data and neither distinguished between participants in different life situations.

To sum up, identity processes and status development are more context-dependent, diverse, multidimensional and non-linear than previously acknowledged within identity status research. Provided that a sense of identity is dynamically related with new challenges beyond adolescence, identity processes and their relationships with developmental tasks such as family formation and entering working life should be accounted for. To our knowledge, however, no previous study has examined the impact of completing developmental tasks on identity processes in young adulthood.

Developmental tasks of young adulthood and their postponement

Contemporary life course theorists define developmental tasks as culturally and historically set, age-specific transitions that are expected of the majority in society (Elder & Giele, 2009). The five key traditional markers of attaining adulthood have been (1) leaving the parental home (i.e. independent living), (2) finishing formal education, (3) entering working life (i.e. educational attainment and work status), (4) forming a romantic relationship and (5) becoming a parent (Elder & Shanahan, 2007). Achieving developmental tasks indicates compliance with social norms. In other words, developmental tasks function as milestones on a track of social integration

and happiness, generating meaning for the individual by indicating current success and projecting a future horizon. Several studies have shown that achieving developmental tasks (especially career), as compared to still being in the process of attaining them, is related to higher life satisfaction and well-being (e.g. Howard, Galambos, & Krahn, 2010; Schoon, Chen, Kneale, & Jager, 2012; J. E. Schulenberg, Sameroff, & Cicchetti, 2004). Moreover, in terms of personality changes, mature life transitions increase conscientiousness, whereas non-normative life choices strengthen neuroticism (Leikas & Salmela-Aro, 2015).

While these tasks were in mid-20th century 'completed' generally around the age of 20, today they are achieved 5-15 years later, if at all. On an individual level, the postponement of developmental tasks has been linked with new life path opportunities and social norms encouraging openness and 'reflexive life management', all provided in turn by new technologies and higher living standards (Arnett, 2004; Furlong, Cartmel, & Biggart, 2006). American youth desire freedom to explore their future options much longer and more carefully than previous generations and many consider age 30 as the new 'deadline' for career and relationship commitments (Arnett, 2004). Arnett has coined the term *emerging adulthood* to refer to a new developmental life phase roughly between ages 19 and 24, which is marked by adult responsibilities and independence but also an intensified exploration of ideals, roles and possible future commitments. Firm commitments are not established before young adulthood. A qualitative study of Finnish and French young women suggested that traditional commitments are still aspired but not established without a sense of autonomy and certainty (Mary, 2012). In other words, developmental tasks and long-term commitments more generally have changed meaning for social integration and transitional shifts have become somewhat more gradual, de-standardized and interconnected, rather than simultaneous as before (Brückner & Mayer, 2005; Buchmann & Kriesi, 2011).

From a structural viewpoint, in contrast, the prolongation of youth has been seen as a consequence of changes in labour markets, employment, consumption and an intensified

commodification of relationships (Elliott, 2015; Furlong, 2009). For instance, young adults are currently exposed to an increasingly precarious labour market with poorer work conditions and equality in opportunities than before (Côté, 2014; Furlong et al., 2006). Youth engage in higher and longer educational tracks and postpone their marriage and parenthood simply because they lack financial security (Settersten, 2012). Similarly, it is harder than before to pinpoint a clear ending in studies and transition to work-life because moving back-and-forth between studies and work-life is simply necessary. In other words, 'disruptions' in traditional transition patterns are due to restrictions on choice rather than freedom of choice. At the same time, and in addition, youth are faced with a societal spirit of ceaseless re-invention of the self, demanding non-stop self-realization among seemingly endless life path opportunities (Elliott, 2015). As life is increasingly framed as an ongoing project devoid of societal guidance and support, the result is default individualization, characterized by indecision and a loss of agency (Schwartz, Côté, & Arnett, 2005). The risk is higher numbers of marginalized, anxious young adults, who are unable to choose and/or engage satisfactorily in education, work and/or relationships. Hence, to have trust in the future and a willingness to engage, uncertainty and unpredictability must somehow be buffered against. For instance, the emotional costs on the personal level (e.g., lack of confidence in making commitments) of poor employment prospects may be counteracted and personal agency supported by a strong state social security system. Hence, how young adults cope with developmental tasks and whether they experience them as positive or negative challenges depends on the interplay between demands and resources on the personal, social and environmental levels (Grob, 2001). However, sociological life-course research has thus far paid little attention to the interplay between (socio)psychological capacities (e.g., motivation, future plans) and transitional events (Buchmann & Kriesi, 2011).

Case Finland

Finnish youth have with few exceptions followed their western peers in extended transitions (Arnett, 2006). For instance, mean graduation age from tertiary education is at age 27 slightly above OECD average (OECD, 2017). Similarly, Finns get married around age 32 and women receive their first child at age 29, both figures being slightly above the OECD means (OECD, 2016b; OECD, 2016c; Official Statistics of Finland, 2016). Childbirth, in general, has recently been on the agenda in Finland because in 2017 the total fertility rate hit an all-time low (Official Statistics Finland, 2018).

One key factor promoting long transitions in Finland is the extensive financial support provided by the government (e.g. study grant, housing supplements), meaning that considerable social and economic independence from family and societal structures is gained quite early. For instance, this is why Finnish youth (along their Nordic peers) have not followed the international trend of living with parents for an extended time. Instead they move out of home already around the age of 21 (average age 26: Eurostat, 2017). Similarly, Finns do not feel an economic pressure to get married early. Instead one third of Finnish youth aged 20-29 choose to cohabitate, considerably more than in other OECD countries (Eurostat, 2015; OECD, 2016a). Overall, a substantial part of Finnish emerging adults take a year or more off after high school to travel, work or pursue projects and dreams (plus compulsory military service for young men), then followed by tertiary education lasting on average 6-7 years (Parker, Thoemmes, Duineveld, & Salmela-Aro, 2015). Due to the gap years, Finns enter tertiary education at age 24, much later than the OECD average (OECD, 2017).

Another factor prolonging the transition to work-life is that the majority of Finnish students work alongside their studies. Mary (2012) has suggested that the traditional study-to-work transition should be relabelled a study-and-work phase in Finland. Students study and work partly because of their wish to explore and gain experiences of adult life and responsibilities but also because of a pressure to improve their future position on an increasingly precarious labor market, marked by uncertainties in achieving education-related work. Namely, although youth

unemployment in Finland is currently EU average, temporary contracts are somewhat more prevalent than elsewhere (Eurostat, 2017). Furthermore, since the global economic recession began in 2008, Finnish youth have been most worried about their own livelihood and future, significantly more than health, loneliness or criminality (Myllyniemi, 2017; Official Statistics of Finland, 2013). Hence, Finns receive a lot of support from society for their autonomy and personal growth, but they also face considerable uncertainties with regard to planning their futures.

Current study

While conventional transitions have been prolonged, they remain important for well-being and continue to be navigated. The present objective was to shed light not only on how identity processes of exploration and commitment develop beyond adolescence but, more importantly, the impact of prolonged transitions on a sense of identity, in this instance the transition from emerging to young adulthood. A further objective was to investigate where Finnish young adults anchor their identity in these circumstances. Moreover, are all transitions equally important for a sense of identity or are some more important than others? To contribute to filling these gaps in literature, we posed three research questions: first (Q1), how do identity processes, as measured by the DIDS (domain of general future plans), evolve during the transition from emerging to young adulthood (between ages 24 and 29)?; second (Q2), is development in identity processes moderated by sex and success in transitional events, such as independent living, cohabitation, achieving education-related work and having children?; and third (Q3), treating identity processes as outcome variables, which developmental task most strongly predicts changes in identity processes between T1 and T2 when controlling for the shared variance of other tasks?

In line with the study of Finnish young adults mentioned earlier, showing no change in commitment levels but less exploration with higher age (Mannerström et al., 2016), we hypothesized that (H1a) commitment processes decrease or stay levelled, (H1b) adaptive exploration processes decrease and (H1c) ruminative exploration decrease or stay levelled between

Time 1 and Time 2 (T1 and T2, respectively). The further rationale for this is based on the observation that having a career is the most important and meaningful transition for young adults, that is, a steady career is aspired before deciding on marriage and children (Arnett, 2014; Mary, 2012). Indeed, occupational identity seems to play the key role in overall identity development in western countries (Kroger & Haslett, 1991; J. Schulenberg, Bachman, Johnston, & O'Malley, 1994). Thus, as youth are approaching the end of their studies and the perceived 'deadline' for self-exploration and developmental tasks, young adults decrease their exploration of current and possible future plans. However, now threatened by poor and uncertain career prospects, they are unable to withdraw from rumination and form firm commitments.

Second, regarding interaction effects between development in identity processes, success in transitional events and sex, we hypothesized that (H2a) having completed a task already before T1 and maintaining it through the study, or alternatively completing one during the study would strengthen commitments and lessen exploration. That is, success in developmental tasks builds certainty, launches the individual towards new opportunities and challenges – the next level, so to speak. In contrast, being unsuccessful in or reverting in developmental during the study period would weaken commitments and increase exploration, especially the ruminative aspect. In other words, the approaching deadline builds pressure to explore options and engage. Further, for the reasons given above, we hypothesized (H2b) the moderator effect to be the strongest in achieving a job, followed by parenthood, cohabitation/marriage and independent living. The latter two were considered less important for future plans at this stage because Finnish emerging adults move away from home before occupational issues become critical and relationships are more casual/non-committed although living together with a partner is very common (Arnett, 2006). We did not expect sex differences in development (H2c).

Finally, for the same reasons, we hypothesized that (H3) achieving education-related full-time employment would be the strongest predictor of changes in identity processes between T1

and T2, that is, stronger commitments and weaker exploration, followed by parenthood, cohabitation and independent living.

Methods

Participants

The data was drawn from two waves of the longitudinal Finnish Educational Transitions-study (FinEdu), mapping well-being and engagement trajectories during important transitions in adolescence and young adulthood. All adolescents aged 15 and 17 in a mid-sized town in central Finland were sampled in 2004 and followed over a period of 13 years. The data can thus be considered fairly representative of Finns born in 1988. In this study T1 consisted of 1096 participants (61% women, $M_{age} = 24$) of which 854 (i.e. 78% of the T1 sample) continued to T2 (63% women, $M_{age} = 29$). The data collection was administered through postal or online questionnaires and so the participants gave their informed consent at each wave separately. The overall majority were Finnish-speaking. Figure 1 shows participants' occupation at T1 and T2. At age 24 nearly half of the sample were primarily studying (48%) while around one third indicated they were working (15%) or both studying and working (17%). Only 6% were unemployed. At age 29 the tables had turned. Around half of the sample were now primarily working (53%), one sixth were studying and working (15%) and only one tenth were studying. Unemployment had risen only slightly by T2 (8%) and individuals taking care of children at home had risen from 1% to 11% between T1 and T2.
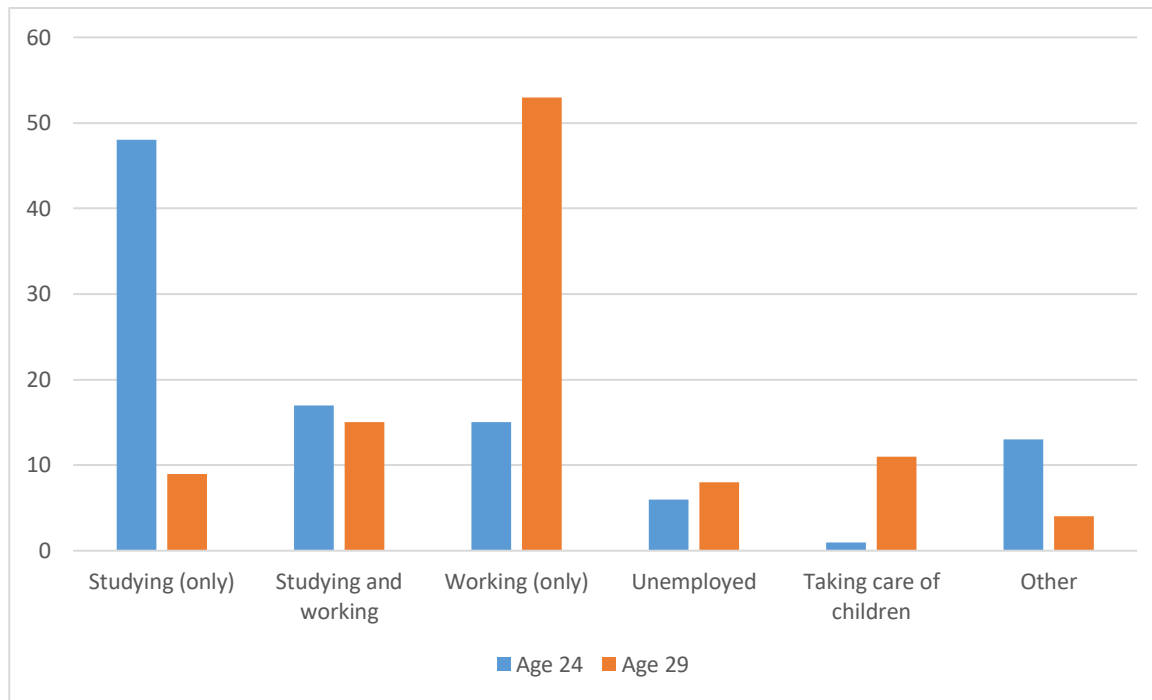
Figure 1. Occupation at T1 (N = 1096) and T2 (N = 854).

In terms of attrition analyses, men (χ^2 = 10.87, p < .005, C = .10) and unemployed (χ^2 = 14.84, p < .001, C = .12) participants were more likely to drop out between T1 and T2. Significant differences between those who completed both measurements and those who dropped out was not found on the other variables. In our main analyses we used only participants that took part in both measurements (N = 854).

Measures

Identity. Identity formation and evaluation processes were measured with the Finnish 11-item short-version of the DIDS (Marttinen et al., 2016; see Luyckx et al., 2008 for full version). The subscales cover *commitment making* (e.g. 'I have decided on the direction I'm going to follow in my life'), *identification with commitment* ('My future plans give me self-confidence'), *exploration in breadth* ('I think actively about different directions I might take in my life'), *exploration in depth* ('I think about the future plans I already made') and *ruminative exploration* ('I worry about what I want to do with my future'). The statements are evaluated on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach alphas for commitment making, identification with commitment, exploration in breadth, exploration in depth and ruminative

exploration were .88, .89, .75, .90 and .85 at T1. The equivalents for T2 were .90, .85, .77, .78 and .85.

Developmental tasks of young adulthood. We measured success in four developmental tasks (Elder & Shanahan, 2007): (1) Not living with parents anymore (i.e. independent living), (2) cohabitation/marriage, (3) parenthood and (4) entering working life. The fifth task, finishing education, was not included due to the fuzzy and changed nature of studying and working. Instead we defined the fourth task as education-related full-time employment, in this way marking an end to studies, at least for the time being and moving on to an intended occupational path. Figure 2 shows the percentage of participants having completed developmental tasks at T1 and T2.
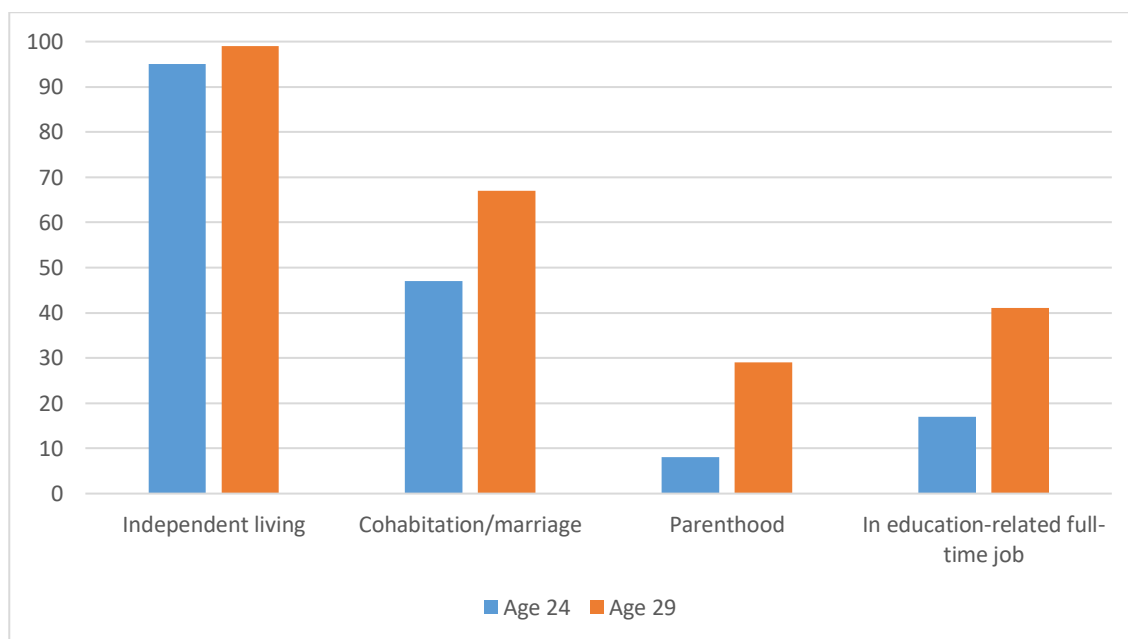

Figure 2. Developmental tasks completed at T1 (N = 1096) and T2 (N = 854).

Data analyses

For Q1 (how mean levels evolve between ages 24 and 29) and Q2 (are mean levels moderated by sex and success in transitional events), a one-way repeated measures ANOVA was conducted. This analysis showed, first, whether significant changes occurred in the mean levels of the identity processes between ages 24 and 29, and, second, if such changes were affected by a categorical variable, in this case success (or reversion) in developmental tasks. Means and standard

deviations are presented in Table 1. For H2a (i.e., having completed a task before T1 and maintaining it through the study period, or alternatively completing one during the study period would strengthen commitments and lessen exploration) and H2b (i.e., achieving a job would have the strongest moderator effect, followed by parenthood, cohabitation/marriage and independent living), the categorical variable was formed according to (1) having completed the task already at T1 (and through T2), (2) having achieved the task by T2, (3) having reverted in the task by T2 and (4) having achieved the task at neither T1 nor T2. Parenthood, however, consisted of only three levels as only one participant had lost a child (i.e. category 3).

Table 1

Mean levels of the identity processes at T1 and T2

Means	N	T1	T2
Commitment making	792	3.69 (.88)	3.61 (.98)
Identification with commitment	790	3.51 (.93)	3.39 (.94)
Exploration in breadth	788	3.90 (.77)	3.70 (.86)
Exploration in depth	792	2.81 (1.18)	2.75 (1.06)
Ruminative exploration	792	2.66 (1.03)	2.62 (1.06)

Note. T1 = age 24; T2 = age 29.

To examine Q3, that is, which developmental task most strongly predicts changes in identity processes, we formed four separate variables with values 0 or 1, indicating non-progress or progress in each developmental task between T1 and T2. We ten regressed (linear regression) these four variables together with the T1 level of each identity process, one at a time, on the T2 levels of the identity processes. This way we were able to simultaneously control for the initial levels of the identity processes (to see if significant changes occurred) and for the shared variance of the different developmental tasks (to see which tasks had a unique effect on changes in identity processes).

Prior to our main analyses, we checked for possible univariate outliers with +/-3 SDs and multivariate outliers with large Mahalanobis distances ($p \leq .001$) on the identity dimensions. Ten multivariate outliers from the T1 data and 4 from the T2 data were removed. Table 2 shows the zero-order correlations between the identity processes. In this study, exploration in depth was more

of the reconsideration-of-commitment subtype, associated more strongly with ruminative

exploration than exploration in breadth (Mannerström et al., 2016; Zimmerman, Lannegrand-

Willems, Safont-Mottay, & Cannard, 2013).

Table 2

Zero-order correlations between the identity dimensions at T1 and T2 (N = 854)

Dimensions	1	2	3	4	5
1. Commitment making	–				
2. Identification with commitment	.66***/.61***	–			
3. Exploration in breadth	.43***/.35***	.44***/.39***	–		
4. Exploration in depth	-.39***/-.44***	-.26***/-.28***	-.02/-.03	–	
5. Ruminative exploration	-.61***/-.62***	-.48***/-.50***	-.13***/-.14***	.65***/.68***	–

Note. T1/T2. *** = $p < .000$; ** = $p < .01$; * = $p < .05$.

Results

Figure 2 reveals that despite the declared prolongation in transitions, young adults are

still largely performing the conventional tasks expected of them by society. That is, between ages

24 and 29 cohabitation and marriage increases from 47% to 67%, parenthood from 8% to 29% and

education-related full-time employment from 17% to 41%. As expected, there is hardly any

increase in independent living because nearly all respondents (95%) had moved away from their

parent's house already at age 24.

Regarding our first question (Q1), how identity processes measured by the DIDS

evolve during the transition from emerging to young adulthood, the results partly supported our

hypotheses. In line with our first hypothesis (H1a: commitment processes decrease or stay levelled),

main effects were found for commitment making ($F(1, 791) = 4.773$, $p < .05$; Wilks' $\Lambda = .994$;

partial eta squared = .01) and identification with commitment ($F(1, 789) = 9.693$, $p > .01$; Wilks' Λ

= .998; partial eta squared = .01). Both showed a slight but significant decrease over time. However,

both were significantly moderated by success in developmental tasks (see below). Hypothesis H1b

(i.e., adaptive exploration processes decrease) was only partially supported, since, as expected,

exploration in breadth decreased significantly over time ($F(1, 787) = 37.528$, $p > .00$; Wilks' Λ =

.954; partial eta squared = .05); however, exploration in depth did not change ($F(1, 791) = 1.739$, p

> .05; Wilks' Λ = .998; partial eta squared = .00). Further, and as expected, (H1c: ruminative

exploration decreases or stays levelled), no main effect was found for ruminative exploration over

time; however, there was a significant interaction effect ($F(1, 791)$ = 1.598, p > .05; Wilks' Λ =

.998; partial eta squared = .00).

        In terms of interaction effects (Q2), hypothesis H2a (i.e., having completed a task

before T1 and maintaining it throughout the study period, or alternatively completing one during the

study would strengthen commitments and lessen exploration) received partial support. First,

parenthood moderated commitment making ($F(2, 781)$ = 3.103, p > .05; Wilks' Λ = .992; partial eta

squared = .01). As expected, participants who were parents (T1: M=3.80, SD=.73, T2: M=3.87,

SD=.84; $t(174)$=.83, p>.05) or became parents (T1: M=4.00, SD=.75; T2: M=3.98, SD=.83;

$t(54)$=.13, p>.05) between age 24 and 29 did not decrease their commitment making. Second,

identification with commitment ($F(3, 786)$ = 2.616, p > .05; Wilks' Λ = .999; partial eta squared =

.01) was in turn moderated by employment situation. In line with expectations, those in education-

related full-time employment at both measurement points did not decrease their level of

identification with commitment (T1: M=3.35, SD=.98; T2: M=3.52, SD=.91; $t(80)$=1.14, p>.05).

Unexpectedly, however, neither did those participants who lost their education-related full-time

employment between T1 and T2 (T1: M=3.53, SD=.93; T2: M=3.49, SD=.86; $t(49)$=.22, p>.05).

Thus, surprisingly, also those participants who attained education-related full-time employment

between T1 and T2 decreased their identification with commitment. Third, employment situation

moderated also ruminative exploration ($F(2, 781)$ = 3.103, p > .05; Wilks' Λ = .998; partial eta

squared = .01). As hypothesized, ruminative exploration increased significantly for those who

lacked education-related full-time employment at both measurement points (T1: M=2.76, SD=1.02;

T2: M=2.81, SD=1.06; $t(411)$=.69, p<.05). Unexpectedly, however, participants who lost their

education-related full-time employment during the study decreased their ruminative exploration

significantly (T1: M=2.63, SD=1.07; T2: M=2.22, SD=.98; $t(51)$=2.04, p<.05).

Hence, hypothesis H2b (i.e., achieving a job would have the strongest moderator effect, followed by parenthood, cohabitation/marriage and independent living) was supported, as identity processes were significantly moderated by success in developmental tasks such as parenthood and employment. Overall, however, interaction effects were few, weak and in some cases in the opposite direction than hypothesized. That is, completed tasks did not come with firmer future plans in every case or less exploration for that matter. On the contrary, in some instances commitments weakened. Similarly, losing a job or abandoning a job already achieved surprisingly decreased rumination in this sample. Regarding possible sex differences in development (H2c), none were found, as we hypothesized.

Finally, hypothesis H3 (i.e., education-related full-time employment would prove the strongest predictor of changes in identity processes between T1 and T2, followed by parenthood, cohabitation and independent living) was partially supported. Table 3 shows regression coefficients for tasks completed and change in identity processes between T1 and T2. Attaining education-related full-time employment between age 24 and 29 was significantly related with less ruminative and in-depth exploration, as we expected. Likewise, becoming a parent was related with less ruminative exploration as well as an increase in both commitment processes. Unexpectedly, however, education-related full-time employment was not uniquely associated with stronger commitment in future plans. Neither was any of the developmental tasks uniquely related with exploration in breadth. Hence, becoming a parent made the strongest unique contribution to identity processes, not achieving a job.

Table 3
Regression coefficients between completion of developmental tasks and identity processes at T2, after controlling for identity levels at T1 ($N = 779$)

Variable	Commitment making	Identification with commitment	Exploration in breadth	Exploration in depth	Ruminative exploration
Independent living	.07	.03	-.01	-.03	.00
Cohabitation/marriage	.02	.02	.05	.01	-.03
Parenthood	.13***	.10**	-.01	-.05	-.10***
Education-related full-time job	.05	.05	.01	-.09**	-.09**
Adjusted R^2	.18	.16	.12	.12	.26

Note. *** = $p < .000$; ** = $p < .01$; * = $p < .05$.

Discussion

Theory suggests that identity formation is nowadays a more precarious task than before (e.g. Bauman, 2007; Elliott, 2015). A labour market in flux and a market capitalism building on continuous self-expression and -reinvention complicate decision-making and postpone conventional transitions into adulthood. This study found 1) that identity commitment and exploration levels, in general, decrease over time, 2) that success in developmental tasks but not sex moderate this development, and 3) that parenthood and not achieving an education-related full-time job, is the strongest predictor of changes in identity exploration and commitment levels over time. The results support a view of personal identity as a continuously evolving, dynamic process dependent on contextual factors. More interestingly, however, the findings question the common notion that entering a desired career track would strengthen one's identity, as manifested in commitments and confidence in one's future plans.

Our results on how the mean levels of the identity processes developed between age 24 and 29 in our sample (Q1) supported previous findings among Finnish young adults (Mannerström et al., 2016) but conflicted with both those obtained among their Belgian peers (Luyckx et al., 2013) and the developmental hypothesis in general (Waterman, 1982). That is, in this study, exploration of alternatives and engagement in future plans weakened simultaneously with higher age, whereas ruminative exploration stayed levelled. First, assuming that exploration of and engagement in future plans peak during mid-twenties and then decrease, these findings are in line with the so called MAMA cycles, that is, successive commitment-exploration cycles (Stephen et al., 1992). The results of the present study question the previously commonly held notion in the identity status literature of identity achievement as a fixed and stable end-point (e.g., Marcia, Waterman, Matteson, Archer, & Orlofsky, 1993) and instead support Erikson's (1958) original idea that a sense of identity is never finalized but must instead, when facing new challenges, be reconstructed time and time again. These results underscore recent results and theory that identity is

a dynamic, non-linear process (see Schwartz et al., 2015 for a discussion), and hence the crucial importance of studying mean-level changes in identity processes beyond adolescence (Arnett, 2014; Waterman, 2015). For instance, whether these young adults grow uncertain about their future plans before eventually re-strengthening their commitments or exploring new options remains.

Interestingly, our finding also contradicts the developmental hypothesis in identity research (Waterman, 1982) and Arnett's (2004) theory of emerging adulthood as a new interphase of intense identity exploration that takes place before young adults settle for commitments at an age closer to 30. Indeed, our respondents completed developmental tasks (although very slowly) during this time frame and lowered their exploration of future alternatives, as expected, but simultaneously their future commitments weakened and ruminative exploration stayed levelled. Although young adults could be expected to be super engaged in their future plans at this stage, having finished school, entered working life and perhaps embarked on planning a family, this 'depressive' trend is not surprising in light of theory on changing working conditions and poor employment prospects. Côté (2014) argued that young adults are increasingly demoralised and anxious about their future due to the systemic proletarianization of youth as a population. They have poorer earning power and education-to-work prospects than the previous generation (see also Furlong, 2009 for a discussion on class). This does not, however, explain why the same developmental trends were not recorded among Belgian young adults (Luyckx et al., 2013). Perhaps this difference in future certainty is related to the fact that Finnish young adults are more often on temporary job contracts than their peers abroad (Eurostat, 2017), as working alongside studying is the norm and transitions are in general more frequently postponed than elsewhere (OECD, 2016a; OECD, 2017; Parker et al., 2015). For instance, in the present Finnish sample a markedly low proportion (41%) had achieved education-related full-time employment at age 29. However, the Belgian study did not give information on the completion of developmental tasks, and thus this question also remains.

Second, this study contributed to the literature on identity process-development over time (Mannerström et al., 2016) by examining how success in transitional events moderated development in identity processes (Q2). The present results were only partially supported and rather surprising. Namely, although parenthood and employment to some extent protected against a decrease in future certainty (e.g., unemployment increased ruminative exploration), as hypothesized, commitments and confidence in future plans did not grow stronger. On the contrary, gaining or losing a job had some counterintuitive consequences. That is, attaining education-related full-time employment was associated with less identification with commitment, whereas losing a job was associated with less ruminative exploration. The latter observation might be explained by the fact that, by age 29, among those who lost or quit their education-related full-time job between the measurement points, most were either taking care of their children at home, had become private entrepreneurs or had started studying again. Only 8% indicated they were unemployed at T2. Hence, job loss was not involuntary but due to new self-determined projects, goals and aspirations, thus lessening rumination.

In contrast, the finding that identification with commitment (i.e., confidence in one's future plans) weakened despite the attainment of education-related full-time employment is very interesting for several reasons. First, it challenges the commonly held view of occupational achievement as the dominant component driving overall identity development (Kroger & Haslett, 1991; J. Schulenberg et al., 1994). In other words, attaining education-related full-time employment should strengthen one's sense of identity, not weaken it. Further, this result does not mesh with previous findings suggesting that attaining developmental tasks is linked with well-being and life satisfaction (Howard et al., 2010; Schoon et al., 2012; J. E. Schulenberg et al., 2004), especially since identification with commitment has been the strongest predictor of well-being (Mannerström et al., 2016; see Schwartz et al., 2015 for a discussion). This would suggest that the respondents in this study either grew more dissatisfied with their life (despite attaining education-related full-time

employment) or that their subjective standards had changed. The latter interpretation would be in line with studies suggesting that once young adults enter working life and are confronted with its (sometimes unexpected) realities they readjust optimally by downgrading their future aspirations (e.g., Tomasik, Hardy, Haase, & Heckhausen, 2009). This tendency might be heightened in the context of a labour market characterized by increased uncertainty, as mentioned above. To summarize, although young adults complete their most desired transition (Arnett, 2014; Mary, 2012) and achieve their target career position (full-time), which appears to be an increasingly difficult prospect (Côté, 2014), they grow disillusioned about future employment and experience loss of confidence.

An additional factor contributing to lower identification with commitment (despite education-related full-time employment) might be the current (hegemonic) notions of flexibility and continuous change (Bauman, 2007). As Elliott (2015) states, achieving a stable identity was a project of the past. In the current cultural climate of what has been termed the *new individualism*, freedom and autonomy are validated through a perpetual re-invention of the self, manifested in shallow and short-term engagements (work, relationships, hobbies etc.). That is, seemingly endless life path opportunities demand self-realization, but ambivalently, without the establishment of firm commitments. Although a strong desire to form commitments might exist, one is encouraged to continuously question the meaningfulness of one's (occupational) choices, perhaps also reflected in this study in the fact that ruminative exploration did not decrease across the whole sample. In other words, as soon as (or although) a desired position or objective is achieved, one becomes dissatisfied, starts disengaging from it and looking for options. In any case, it is obvious from these results that how young adults cope with developmental tasks depends on the dynamics of demands and resources on all three levels – personal, social and environmental (Grob, 2001).

Finally, regarding our third research question on which developmental task most strongly predicted changes in identity processes (Q3), the results partially supported our hypothesis.

Namely, although both parenthood and employment predicted identity, as expected, parenthood was the stronger of the two and only parenthood was associated with the commitment processes. In other words, contrary to previous results on the centrality of occupational achievement for a sense of identity (Kroger & Haslett, 1991; J. Schulenberg et al., 1994), these results suggest that parenthood is more important for a sense of identity (in the domain of *general future plans*) than work. Interestingly, this result held for both men and women. The further finding that cohabitation/marriage had no unique effect on identity might also be due to the above-mentioned reasons, namely, the greater flux and shallowness experienced in relationships and other domains of life than earlier (Arnett, 2004; Elliott, 2015). Hence, as a final achievement (in contrast to relationships, career and housing), parenthood perhaps currently offers Finnish men and women valuable stability and meaning, an anchoring point for a sense of identity in what is otherwise an unstable and unpredictable environment for young adults (Côté, 2014). On the other hand, being able to live with ruminative exploration and seek meaning, commitment and happiness elsewhere (parenthood, work-and-study, short contract work) than in full-time career employment could be viewed as a very healthy, practical, response to labour-market uncertainties in the new knowledge economy.

This study has its limitations. First, although the initial sample was reasonably representative, the attrition analyses showed men and unemployed persons to be somewhat underrepresented at T2. However, because the differences between men and women were non-significant in all analyses, the slight decrease in the male sample is unlikely to have altered the results. Without the attrition in unemployed respondents, ruminative exploration might perhaps have been stronger (and strengthened), because it was high among this group at T1, as noted in the results section. Second, given that identity interacts dynamically with contextual factors, these results cannot be generalized to young adults in other cultures or generations with dissimilar societal expectations, life path opportunities or challenges. In other words, altering some component

in the cultural context would produce different development in identity processes. Third, the self-reported pencil-and-paper type of research method leaves the subjective meaning attached to broad concepts like *future plans* open to speculation. For instance, we do not know if one participant thinks more of occupational issues and another one of family issues. Similarly, increased/decreased levels of identity processes are open to speculation. That is, we do not know whether decreased levels of, say, commitment making, between age 24 and 29 mean greater uncertainty in future plans or indicate a shift in how the respondents perceive their situation and the meaning of future commitments. Perhaps nearly thirty-year-olds do not think of their future plans in terms of certainty, as they did five years earlier, because they have already made some choices. At age 24, the context is different; planning for the future is likely to be much more central. In other words, commitment-making at age 29 might be weaker when measured but *subjectively* on the same level, or just different due to a recalibration of meaning and context.

Based on the results, we suggest that future studies include interviews with the participants. Better triangulation of results is achieved when the subjective meanings attached to identity process-development, especially the meaning of lowered identification with commitment, are also accounted for. Second, we recommend that future research examine identity process development with finer distinctions between individuals in different life situations. For instance, type of work or occupational track and length of studies might affect identity processes differently. Third, and for the same reasons, more than two measurement points are recommended. This would allow a more nuanced picture and interpretation of different factors inflicting on identity processes and tracking of MAMA cycles.

Finally, due to the limitations of the study the present results allow only cautious policy recommendations. First, recent studies suggest that youth have poorer and more uncertain work prospects than previous generations (Côté, 2014). Given that a sense of identity is essential for well-being, and our current results suggest that young adults grow more doubtful about themselves

during the transition to working life, political decisions should aim at stabilizing labour markets and improving working conditions, thereby improving predictability and prospects of employment. This would reduce stress in young adults by strengthening their confidence in financial security and planning for the future, possibly also increasing their willingness to start families (Settersten, 2012). Alternatively, young adults's trust in the future and sense of continuity could be strengthened by further improving different forms of social security, for instance, through universal income. This could also help detach identity from the work sphere. Second, but more importantly, we urge policy-makers in welfare states like Finland to at least engage in a thorough debate on the effects on success and happiness of the changes currently taking place in values and norms. To us, it seems that personal happiness is nowadays linked primarily with success in working life, meaning having a successful career. To be able to succeed in this task one needs to flexibly jump not just between jobs, but between different ideals, goals and careers, an imperative which seems to have profound emotional costs.

Conclusion

Conditions for decision-making and long-term engagement in young adulthood and beyond have in recent decades changed radically, as manifested in the postponement of transitional events (Arnett, 2004). This has consequences for forming a sense of identity, as it means greater uncertainty and recurrent phases of exploration. This study examined (1) development in identity processes between two timepoints, at ages 24 and 29, in a Finnish sample of emerging and young adults, (2) how success in developmental tasks moderate development in identity processes; and (3) which developmental task most strongly predicts changes in identity processes. The results suggested that identity commitment and exploration processes either decrease or stay levelled over time. Second, success in developmental tasks such as employment and parenthood protect against growing future uncertainty, but only in some cases and not in others. Surprisingly, attaining a desired full-time job was accompanied by weaker identification with commitment, perhaps because

current and future aspirations are continuously being readjusted or new ones set. Third, and

relatedly, perhaps because of a cultural context exhibiting greater flux than before, becoming a

parent seems to support a sense of identity more than achieving an education-related full-time job.

This longitudinal study of the identity processes of emerging and young adults underscores the

importance of examining these processes by tracking their mean-levels and supports the view of

identity as open-ended and always context-dependent, as reported elsewhere in the research

literature.

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