



Modes of personal identity formation: A preliminary picture from the lifespan perspective[☆]

Ewa Topolewska-Siedzik^{*}, Jan Cieciuch

Cardinal Stefan Wyszyński University in Warsaw, Poland

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ABSTRACT

The present study investigates eight identity formation modes (Socialization, Consolidation, Exploration, Moratorivity, Defiance, Diffusion, Normativity) from the Circumplex of Identity Formation Modes (CIFM; Cieciuch & Topolewska, 2017) in 13 age groups from emerging to late adulthood ($N = 3216$ adults aged 18–65). The results suggest that CIFM modes associated with cohesive identity development increase with age and that CIFM identity formation modes associated with negative identity and anxiety decrease in subsequent age groups. However, the CIFM mode associated with identity activity, i.e. Exploration and its opposite pole — Petrification show a curvilinear trend with age. Finally, the mean-level of the Diffusion mode is the same across all age groups. The study confirms that the CIFM's eight identity formation modes represent qualitatively distinct approaches to identity formation, which differ between age groups in a theoretically consistent manner.

1. Introduction

Personal identity in developmental and personality psychology is usually seen as a cognitive self-structure which describes how people seek answers to the question 'Who am I?' (see: Erikson, 1959; Marcia, 1980; McLean & Syed, 2015; Schwartz, Luyckx, & Vignoles, 2011). Although this answer, in terms of identity content, depends on particular individual, it is possible to differentiate various methods people use to develop their identity. While it is generally thought that the most dynamic developments in identity formation take place during adolescence, researchers commonly agree about the lifelong nature of the identity formation process. Nevertheless, the majority of research focuses mainly on the period of adolescence (for overview see Crocetti, 2018; Kroger, Martinussen, & Marcia, 2010), therefore neglecting the notion of identity formation as a lifelong process. However, the recently proposed Circumplex of Identity Formation Modes (CIFM, Cieciuch & Topolewska, 2017; Topolewska & Cieciuch, 2017) fills this gap and enables to describe and measure various identity formation modes while taking the lifespan perspective on identity development into account. The current study describes identity formation from emerging to late adulthood having regard to categories proposed in the identity formation circumplex.

1.1. Identity formation in the lifespan

According to Erikson (1959), the process of identity formation can result in a mature identity synthesis or it can lead to role confusion. That means, some approaches are more adaptive and enhance the likelihood of achieving a mature identity while others are rather maladaptive. Knowledge about the different approaches people take to deal with identity issues can help to explain many psychological outcomes. There is a large number of studies showing the role of identity in well-being (e.g., Berzonsky & Cieciuch, 2014; Karaś, Cieciuch, Negru, & Crocetti, 2014), academic achievements (e.g., Pop, Negru-Subtirica, Crocetti, Opre, & Meeus, 2016) or psychological problems and risky behaviors (e.g. Hardy et al., 2013; Hatano, Sugimura, & Crocetti, 2016).

Taking into account the significance of identity in individuals' lives it is no wonder that identity formation has been intensively studied in psychology over last years. There have been many theoretical models of identity formation developed, the most of them being rooted in the classical theory of psychosocial development by Erikson (1959). Marcia (1966) proposed the first operationalization of Erikson's work which served as a point of departure for many of the currently used conceptualizations. More specifically, in Marcia's (1966) model two main categories of exploration and commitment allow us to describe differences between people in their approach to dealing with identity issues. The variety of models built on the basis of exploration and commitment

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^{*} Corresponding author at: Institute of Psychology, Cardinal Stefan Wyszyński University in Warsaw, Wóycickiego 1/3 budynek 14, 01-938 Warsaw, Poland.
E-mail addresses: e.topolewska@uksw.edu.pl (E. Topolewska-Siedzik), j.cieciuch@uksw.edu.pl (J. Cieciuch).

Table 1
Characteristics of identity formation modes (Topolewska & Ciecuch, 2017).

Mode	Description
Socialization	Defining oneself in such a way as to perform one's life roles well, according to the current stage in one's life. Beliefs concerning oneself form a coherent and stable system associated with a sense of being in the right place.
Consolidation	Using information derived from exploration of different options for building a relatively stable identity structure. The individual does undertake long-term commitments, but is still open to other options and thus may modify them.
Exploration	An active involvement, agency in building an identity structure and solving identity-relevant dilemmas and problems. The focus is on probing one's possibilities and testing whether a given activity is suitable for oneself.
Moratorivity	Actively seeking one's place in life by exploration combined with commitments and engagements to ascertain whether they will be suitable for oneself in various respects. This quest is associated with a desire for a permanent commitment, which may give rise to tensions given the temporary nature of one's current commitments.
Defiance	The belief that one has not found one's place in life. Because this mode is located between Diffusion (identity indetermination) and Moratorivity (desire to undertake a commitment), it poses the risk that the adopted commitment will be in stark opposition to social norms.
Diffusion	A lack of a stable identity structure and being motivated in one's actions, beliefs, and decisions by situational variables and the environment rather than a cognitive identity structure.
Petrification	A lack of interest in thinking about oneself and developing an identity structure. The characteristic feature is fragmentation of a rather poorly developed cognitive identity structure, with the fragmented elements being rigid or even frozen.
Normativity	Forming the structure of identity based on the expectations of others. Those expectations are not assessed, but rather uncritically adopted, which may be associated with certain cognitive rigidity and distortion.

have been predominantly implemented in research on the adolescents' identity (see Crocetti, 2018; Kroger et al., 2010). Research on identity in adulthood relates primarily to emerging adults, while research on identity at the later stages of development is very rare (Fadjukoff, Pulkkinen, & Kokko, 2016; Kroger, 2017; Whitbourne, Sneed, & Skultety, 2002; Whitbourne & VanManen, 1996).

Although it could be said that studies on identity in the literature cover all stages of human development, there is no systematic analysis, neither theoretical nor empirical which enable us to examine identity formation from late childhood to late adulthood. For instance, the Early Identity Exploration Scale (Klym & Ciecuch, 2015), is for older children and early adolescents; models and measurements developed for the three identity formation processes (Crocetti, Rubini, & Meeus, 2008), five dimensions of identity formation (Luyckx et al., 2008) or three identity processing styles (Berzonsky, 1989) seem to be the best suited for adolescence and emerging adulthood, while the Whitbourne et al. (2002) model of identity processes aims to describe identity formation in adulthood. The investigation of identity formation as a life-long process requires longitudinal research across several decades and developmental periods — a challenging undertaking. One of the main requirements of such a longitudinal study is an appropriate model for describing identity formation at various developmental stages as well as an instrument usable for measuring identity formation in various age groups. The CIFM used in the current study (Ciecuch & Topolewska, 2017) aims to integrate identity formation constructs developed within the Erikson-Marcia tradition in a systematic way that also allows to study identity formation process from adolescence to late adulthood.

1.2. The Circumplex of Identity Formation Modes

The main feature of the CIFM (Ciecuch & Topolewska, 2017; Topolewska & Ciecuch, 2017) is an integration of various identity formation constructs developed within the Erikson-Marcia tradition such as the three-dimensional model (Crocetti et al., 2008), the model of five identity formation processes (Luyckx et al., 2008) and Berzonsky's (1989) model of identity formation styles to create a shared framework where a synthesis of identity concepts is possible. Identity is understood in the CIFM as a personal cognitive structure self-defining the individual, consisting of elements that the individual deems relevant to who he or she is (Ciecuch & Topolewska, 2017). In order to describe the identity formation process Ciecuch and Topolewska (2017) proposed a category of mode that is defined as a type of identity management consisting of specific cognitive, affective, and behavioral mechanisms used for forming identity.

The CIFM distinguishes eight identity formation modes located in the circumplex. The main axes of the circumplex are redefined

exploration and commitment, the classic categories of Marcia (1966). These two axes could be seen as two basic subsystems in identity formation responsible for its growth and stability, similarly as agency and communion (Wiggins, 1991) in interpersonal circumplex are treated or pair of constructs Alpha and Beta (Digman, 1997) also known as Stability and Plasticity (Ciecuch & Strus, 2017; DeYoung, Peterson, & Higgins, 2002) are considered as two higher-order factors of personality structure. Marcia's classic categories of exploration and commitment were redefined by the CIFM taking current social and cultural changes into consideration, as well as placing them within a broader personality structure based on recent developments in personality psychology. Specifically, within the CIFM, the Socialization vs. Defiance axis (conceptually related to Marcia's commitment) is responsible for maintaining a cohesive identity structure and the Exploration vs. Petrification axis (conceptually related to Marcia's exploration) refers to expanding and enriching the identity structure. Ciecuch and Topolewska (2017) theoretically defined two basic axes of CIFM as directly underpinned by personality higher-order factors of Alpha/Stability and Beta/Plasticity (Strus & Ciecuch, 2017; Strus, Ciecuch, & Rowiński, 2014) and other modes as conditioned by personality in line with the shape of a sinusoidal function. Empirical investigation on personality background of identity formation modes across adulthood showed that indeed on the level of higher-order factors of personality Alpha/Stability predicts Socialization and Defiance modes of identity formation and Beta/Plasticity predicts Exploration and Petrification modes of identity formation. On the level of five personality traits, the most crucial for identity formation are Conscientiousness and Openness to Experience (Topolewska-Siedzik, Ciecuch, & Strus, 2018). Moreover, longitudinal investigation showed that two higher-order personality factors not only predict the current state of identity modes, but also Beta/Plasticity predicts developmental changes in identity formation (Topolewska-Siedzik & Ciecuch, 2018).

The other two axes in the CIFM, Consolidation vs. Moratorivity and Diffusion vs. Normativity are located between the Socialization vs. Defiance and Exploration vs. Petrification axes. According to the circumplex structure, the pairs of adjacent variables on the circumplex are the most similar to each other, while those on either poles of the same axis differ the most. Table 1 contains short descriptions of the identity formation modes. The preliminary analyses on studied variables are presented in the supplementary materials.

2. Current study

Although identity formation is considered to be a lifelong process (Erikson, 1959; Whitbourne et al., 2002), there is a lack of research from the long-term perspective of lifespan development. One of the

reasons for this could be the lack of model and measurement method suitable for different age groups. Ciecuch and Topolewska (2017) argue that the CIFM is appropriate for describing identity formation in both adolescence and adulthood. As such, the current study uses the CIFM model and its measurement method in order to describe cross-sectional differences in identity formation modes among people at different developmental stages.

Taking into account the theoretical assumptions of the CIFM model and empirical evidence presented in the literature, we formulate the following expectations of differences between age groups regarding the modes differentiated in CIFM:

- (1) Socialization, Consolidation, and Normativity are the adaptive modes that ensure effective functioning in the society. Thus, we expect these modes will increase with age. This assumption is in line with the results suggesting that the frequency of the achievement status increases with time (Cramer, 2004, 2017; Fadjukoff, et al., 2016; Whitbourne & VanManen, 1996). However, literature on the foreclosure identity status, that could be juxtaposed with Normativity delivers less clear image. Nevertheless, consistent with the other two modes of representing mature and cohesive identity formation, we expect Normativity to increase with age.
- (2) We expect that the opposing modes, that are socially maladaptive and associated with anxiety identity-related activity (Moratorivity), negative identity (Defiance) or identity confusion (Diffusion) will decrease with age. This expectation is in line with previous findings indicating a decrease in diffusion and moratorium statuses with age (Cramer, 2004, 2017; Fadjukoff et al., 2016; Whitbourne & VanManen, 1996).
- (3) The two other modes, Exploration and Petrification, are expected to take quadratic trend. We assume Exploration will increase up until early adulthood and then will start to decrease, where Petrification will present the opposite pattern. Generally, the experimentation with one's identity without emphasis on stability is expected to be the highest in emerging adulthood, while in adolescence experimentation is associated with unformed identity structure (Moratorivity) and in adulthood it is rather mature and functional identity structure with openness for new possibilities (Consolidation). In similar way, Petrification mode as least interest in identity-related issues is the lowest in emerging adulthood (Fig. 1).

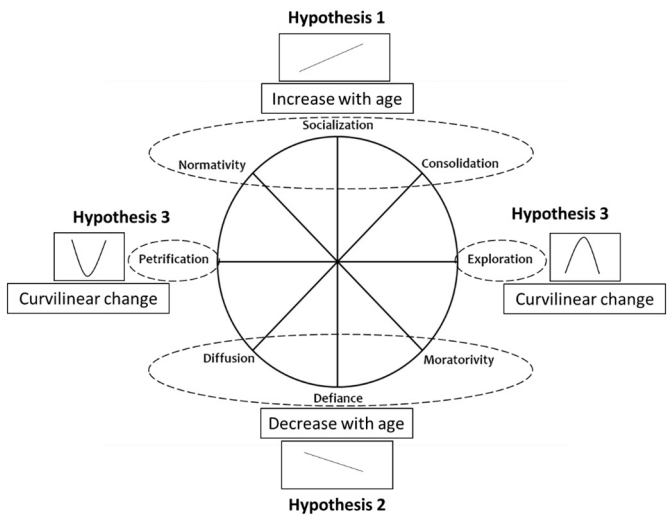


Fig. 1. All hypotheses graphically depicted.

3. Material and methods

3.1. Participants

The sample consisted of $N = 3216$ participants aged between 18 and 65 ($M = 28.79$; $SD = 10.33$; women is 56.5%) collected through several projects on identity formation conducted in Poland, which is a homogeneous country in terms of culture and ethnicity. In all cases data were gathered in accordance with ethical standards, participation was voluntary and anonymous, respondents were informed about possibility to resign at any time. The data were collected by trained research assistants recruited from volunteering students. In exchange, the students were received extra credits for their coursework. The overall sample was divided into 13 smaller subgroups based on participants' age. The main criterion for group differentiation was commonly agreed the rate of identity formation process at particular developmental stages. Identity formation process is considered as the most dynamic in the period of adolescence and emerging adulthood, while in middle and late adulthood it is seen as rather finished or being not strongly engaged into (Erikson, 1959). Having regard to state of knowledge on the issue of identity formation, data were collected in the way that the majority of respondents comes from the emerging adulthood, while the number of participants in more advanced developmental stages decreases (Erikson, 1959; Kroger et al., 2010). Consequently, early age groups embrace smaller range of age and with the following developmental stages the range of age in subsequent groups is getting bigger. For example, emerging adults are assigned to narrower age groups because of the expectation that the identity formation process is more dynamic in nature during the developmental stages of adolescence and emerging adulthood (e.g., Karaš et al., 2014). The final 13 subgroups are presented in Table 2.

3.2. Measurement

Identity formation modes were measured by the *Circumplex of Identity Modes Questionnaire* (CIMQ; Topolewska & Ciecuch, 2017). This measure consists of 40 items assigned to eight subscales of 5 items each. The answers are given on a Likert-like scale ranging from 1 (*not at all like me*) to 5 (*very much like me*). All scales were centered to minimize the impact of the tendency to give extreme answers as well as to get the indicator of a particular mode level with regard to all answers of a given person as is consistent with the usual procedure for circumplex models (Strus & Ciecuch, 2017).

4. Results

Our first step was to examine the circular and factorial structure of the identity formation modes and measurement invariance all tested

Table 2
Characteristics of particular subgroups.

Group	Age	M_{age}	SD_{age}	N	% female
1	18–19	18.52	0.50	245	66.9
2	20	20.00	0.00	242	62.4
3	21	21.00	0.00	297	56.9
4	22	22.00	0.00	306	70.9
5	23	23.00	0.00	261	64.0
6	24	24.00	0.00	212	53.8
7	25–26	25.45	0.50	318	54.3
8	27–28	27.48	0.50	214	44.9
9	29–31	29.92	0.72	251	49.4
10	32–35	33.55	1.14	209	53.1
11	36–41	38.30	1.72	214	46.3
12	42–48	44.91	2.01	210	51.9
13	49–65	54.96	4.88	237	52.7
Total		28.79	10.33	3216	56.5

Table 3
One-way ANOVA results.

Mode	General	Linear	Quadratic
	(<i>df</i> = 12,3203)	(<i>df</i> = 1,3203)	(<i>df</i> = 1,3203)
	<i>F</i>	<i>F</i>	<i>F</i>
Socialization	13.36***	136.99***	4.80*
Consolidation	7.52***	58.69***	13.49***
Exploration	5.04***	8.96**	27.27***
Moratorivity	23.82***	273.57***	0.20
Defiance	12.43***	127.79***	4.95*
Diffusion	1.29	–	–
Petrification	9.22***	65.41***	10.93**
Normativity	3.85***	24.81***	10.75***

*** $p < .001$.

** $p < .01$.

* $p < .05$.

groups. These analyses are presented in the Supplementary material. Importantly, the results suggest that the identity formation modes are organized in line with the CIRM theoretical predictions in all age groups and that configural, metric (boundary) and scalar measurement invariance were established. Therefore, we can further examine our hypotheses.

To verify our first, second and third hypotheses, we conducted one-way ANOVA analyses with a priori contrasts and with each identity formation mode as the dependent variable and age group as the factor. We conducted analyses with linear and quadratic contrasts for all variables. First, we checked for significant differences between age groups in terms of the identity formation modes. We also examined the distribution of each of the mode variables using skew and kurtosis. In only 5 of 112 subgroups (age * mode) values were outside of the normal range $<-1;1>$. The number of individuals each age group was similar. One-way ANOVA results are presented in Table 3 and Fig. 2 presents the Z-scores for all the identity formation modes in each age group.

Results show that there are differences between age groups on all identity formation modes except Diffusion. Moreover, all modes show a significant linear trend with age and Socialization, Consolidation, Exploration, Defiance, Petrification and Normativity also show a significant quadratic trend. Therefore, our first hypothesis that we expected an increase of Socialization, Consolidation and Normativity was confirmed. Socialization increases linearly with age and while a significantly quadratic trend was also found it is weak in comparison. The Consolidation mode also shows a linear increase, however the quadratic trend indicates that it starts to maintain its level around late twenties and finally decreases in later adulthood. The level of the Normativity

mode generally increases, but a closer examination, when significance of quadratic trend is taken into account shows that it can be best described as firstly decreasing and then starting to increase (ages 32–35). Our second hypothesis, that we could expect a decrease in Moratorivity, Defiance and Diffusion with age was only partially confirmed. Moratorivity mode decreases linearly with age and the Defiance mode shows a linear decrease with age, but also a weak quadratic trend indicating that Defiance increases in the oldest age group (ages 36–65). However, there is no significant change with age for Diffusion. Our third hypotheses, that we could expected curvilinear changes in the Exploration and Petrification modes was also confirmed. In the case of Exploration, there is a significant linear trend, however the most marked is quadratic trend showing an initial increase up to age 23 and followed by a general decrease with age. Petrification shows both linear and quadratic trend with age, indicating a general increase but with initial decrease up until the age of 23 followed by an increase after age 23.

5. Discussion

Identity development is commonly considered as a lifelong process. While research on identity formation from ages 12 to 25 is very popular, research on adults' identity formation is less common. The present article aims to help fill this gap by presenting trends in identity formation modes from ages 18 to 65. The results from the current study conducted on $N = 3216$ participants divided into 13 age-based subgroups show a coherent picture of how identity formation modes differ across age groups. The results suggest the levels of modes associated with effective identity functioning increase with age (Socialization, Consolidation, Normativity), while those reflecting identity confusion (Moratorivity and Defiance) show decreasing linear trends. Two other modes, Exploration and Petrification show a clear quadratic trend, with Exploration increasing until age 23 and then decreasing, and Petrification decreasing until ages 22–23 followed by a later increase. Diffusion was the only mode which shows no change across adulthood.

The general linear increase observed for the Socialization, Consolidation and Normativity suggests that identity structure becomes more cohesive and well-functioning with age. Additionally, we also observed quadratic trends for these three modes as well. While the quadratic trend for Socialization was quite weak, the trends for Consolidation and Normativity had some clear turning points. These findings highlight the possibility of multiple pathways in healthy identity formation. Socialization increases constantly and reaches its highest level in middle and late adulthood. Indeed, the Socialization mode represents the ability to live in accordance to the socially accepted requirements of one's current life-stage including fulfilling social roles. Further, the Socialization has the strongest relationship to well-

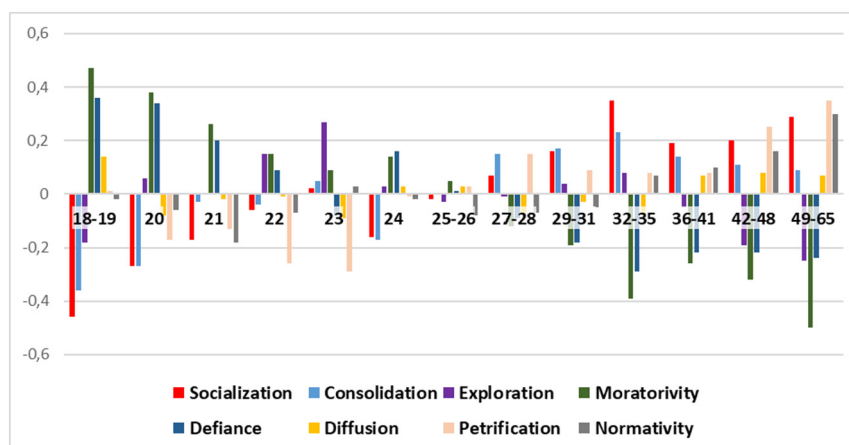


Fig. 2. Z-scores for identity formation modes mean levels in each age group.

being (Topolewska & Cieciuch, 2017). In sum, there is a tendency to grow in identity cohesion and adapt to life-stage appropriate social norms across the lifespan.

In comparison, the Consolidation mode increases only up until the early thirties, which is consistent in some way with longitudinal research by Cramer (2004), where no significant differences of the level of achievement identity status were obtained between middle and late-middle adults. The reason could be less interest in identity formation issues resulting from focus on another life challenges (i.e. support the family, making money and paying off the loan), the stabilization of mature identity structure around thirties, also Consolidation may no longer be the most desirable approach to identity formation. For example, constantly thinking about improving something while already having made strong identity commitments can lead to the questioning of one's social and personal obligations. However, a detailed investigation is needed on why identity Consolidation, which is an approach to identity formation similar in meaning to the achievement identity status has lower level in the group of late than among middle adults.

Finally, we found that the Normativity mode generally maintains its level from ages 18–19 to ages 29–31, followed by a rapid increase in the older age groups. Therefore, our research shows that Normativity increases with age but with particularly fast growth in middle and late adulthood. This finding indicates that living in line with beliefs and norms that are typical for significant others can be different in nature between adolescence and later stages of human development. Behaving consistently with social norms and beliefs set by others in adolescence may mean being obedient to parents and not active in developing their own beliefs. However, the same attitude in adulthood may indicate being responsible, making sacrifices for relatives, and acting in line with social norms.

In the CIMQ three variables are directly connected to active identity formation. These three ways of identity development differ in the impact of cohesion and dispersion in identity structure. First, Consolidation as discussed in detail above refers to a consistent and effectively functioning identity structure. Second, Exploration refers to experimentation with identity-related issues without any desire for strong commitments or making decisions. We found that Exploration changes quadratically with age, as the highest level of Exploration was found in the 23 year olds, followed by the decrease with age. Third, Moratorivity, referring to activity and tensions while searching for meaningful and suitable identity content, decreased across the whole sample after peaking among the youngest participants (18–19 years old). Overall, Exploration is highest among the youngest adults who are likely to be either just finished obligatory school or still pursuing their (higher) education, whereas, Consolidation is the highest among middle-aged adults. These patterns of identity development suggest that identity structure is more and more cohesive with age, and that age therefore influences the most typical tendencies in the active aspects of identity formation.

The Defiance mode could be described in line with Erikson's notion of negative identity (Erikson, 1959). While negative identity among adolescents may be considered as stage of teenage rebellion, long lasting Defiance can lead to an identity structure that contradicts expected social norms. Our findings suggest that Defiance decreases linearly with age, confirming that identity confusion is likely to become weaker with age.

The only mode which maintained a stable level across the different age groups was Diffusion. This mode is related to the diffusion identity status in the Marcia (1966) model and is a type of identity formation that does not include neither active involvement nor functional identity structure. Instead, Diffusion is a noneffective structure which represents succumbing to environmental conditions leading to identity dispersion instead of forming one's own identity. Therefore, the stability of Diffusion across age groups indicates problems with identity formation at different developmental stages, predisposing people to problems with

psychological functioning and psychological health across the lifespan.

The Petrification mode showed a quadratic trend where it initially decreased with later an increase to its highest level in late adulthood. Results like this show that the tendency to have a frozen and incohesive identity structure is low in emerging adulthood when identity formation takes a particularly dynamic form. However, in late adulthood active identity formation with openness to change is rather rare which leads to a hardening of identity and as a result higher levels of Petrification.

Our research confirms existing knowledge about identity formation in terms of increasing identity cohesion and reducing the exploration over the lifespan. However, our results also show differences between various tendencies in identity development influenced by these two main forces. Even though this study comprises more than 3200 participants from a wide range of age it is not free of limitations. It is important to note that the presented research is cross-sectional and could be interpreted only as various groups comparison. Indeed, the next step in examining identity formation across the lifespan should be longitudinal study with multiple measurement points.

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Disclosure of sample, conditions, measures, and exclusions

Used data were gathered within several research projects on personality. Each project was focused on narrow and specific aspect of personality, while in the presented article we combined all data without any exclusions to examine from a wide perspective on relatively large sample the issue of identity formation.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.paid.2018.09.041>.

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