

MARIA KŁYM-GUBA<sup>a</sup>  
JAN CIECIUCH<sup>a,b</sup>

<sup>a</sup>Cardinal Stefan Wyszyński University in Warsaw  
Institute of Psychology

<sup>b</sup>Universität Zürich

## THE DYNAMICS OF IDENTITY EXPLORATION IN VARIOUS DOMAINS IN EARLY ADOLESCENCE: THE RESULTS OF A LONGITUDINAL STUDY

In accordance with the classic – developmental – approach to identity originated by Marcia (1966), there are two basic identity formation processes: exploration and commitment. The first step on the way to mature identity is exploration. The aim of the present study was to analyze the dynamics of exploration in the period when it begins: in early adolescence. The participants in the longitudinal study (with three measurements at half-year intervals) were 327 adolescents aged 11 to 15 ( $M = 13.26$ ,  $SD = 1.20$ ) – elementary and middle school students. The sample was balanced in terms of gender (45% were girls). The instrument we used was the *Early Identity Exploration Scale* (EIES; Kłym & Ciecuch, 2015), enabling the measurement of identity exploration in 12 domains: physical appearance, free time, family of origin, work, boyfriend–girlfriend relationships, own opinion formation, perception of own place in the life cycle, self-reflection, future, future family, outlook on life, and attitude toward rules. The analysis was performed using a latent growth curve model. It turned out that in some domains (physical appearance, work, boyfriend–girlfriend relationships, and outlook on life) the level of exploration systematically increased, despite the relatively short time of the study; the domain of boyfriend–girlfriend relationships was the only one in which we found no interpersonal differentiation in the intensity of this increase. It also turned out that there was interpersonal differentiation in the level of exploration at the outset in all the domains analyzed.

**Keywords:** identity; identity exploration; identity domains; early adolescence; *Early Identity Exploration Scale*; longitudinal study.

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Address for correspondence: MARIA KŁYM-GUBA – Institute of Psychology, Cardinal Stefan Wyszyński University in Warsaw, ul. Wóycickiego 1/3, bud. 14, 01-938 Warszawa; e-mail: maria.klym@gmail.com

The project was partially financed by the National Science Center, Poland (decision no. DEC-2013/09/N/HS6/03020), titled: *Looking for the Beginnings of the Developing Sense of Identity and Their Predictors* (Principal Investigator: Maria Elżbieta Kłym, M.A.).

According to Erik H. Erikson's (1959) psychosocial theory, psychosocial development takes place in consecutive stages, and its course depends on the individual's previous experience and on coping with the developmental tasks important in the earlier stages. In childhood, a person accumulates knowledge about the world and about themselves as well as acquires a sense of being physically and mentally distinct from other people. On this basis, in adolescence, a sense of identity, understood as continuity in time and integrity, begins to develop. The formation of a sense of identity is a process that continues throughout life (Erikson, 1950; Tesch & Whitbourne, 1982; Whitbourne, 2002), but it is the most intensive in adolescence.

The analysis of the literature performed by Brzezińska (2006) reveals four key aspects of human identity from the personal perspective: the senses of separateness, sameness, continuity, and integrity. Thus, the sense of identity is a view of oneself that is the outcome of the accumulation of information about oneself, the evaluation of that information, and self-reflection – a sense of being the same person despite the changes occurring in the environment as well as within the person. According to Marcia's (1966) conceptualization, identity is formed through exploration and commitment. Exploration means actively seeking, considering, and questioning a variety of alternative identity choices, and its purpose is to consciously make a commitment in the next step – to make a choice and take its immediate and distant consequences. Exploration is thus the key process in the period when adolescents' identity formation starts. Moreover, according to Marcia's model, exploration is the first and necessary condition of forming a mature identity.

The aim of this article is to analyze the dynamics of identity exploration in the initial phase of this process: in early adolescence.

### **Identity exploration and its domains**

According to Marcia, exploration and commitment vary in intensity across identity areas (also referred to as domains or spheres). One of the main assumptions of his model was the recognition of the ideological and professional domains as the key ones in identity formation. However, this paradigm emerged half a century ago and, with time, it became less and less compatible with the changing reality of the world and lifestyle, including more and more universal changes in the human life cycle in all of its domains (Stephen, Fraser, & Marcia, 1992; Brzezińska et al., 2012). Marcia's proposal was modified and supplemented in subsequent decades, which led to the emergence of more elaborate models

(e.g., Luyckx, Goossens, Soenens, & Beyers, 2006; Crocetti, Rubini, & Luyckx, 2008) and involved a reconceptualization of exploration – the process of particular importance to the present study, devoted to the beginnings of identity formation. The first scholars to draw attention to the need for an internal redefinition of the exploration dimension described by Marcia were Meeus and colleagues (Meeus, Iedema, & Maassen, 2002), who noted the fundamental difference between exploration undertaken before and after making a specific commitment.

In contemporary identity research, various types/kinds of exploration are mentioned. Due to the qualitative differences between them, the following types are distinguished: exploration in breadth, exploration in depth, and ruminative exploration.

The exploration in breadth dimension was proposed by Luyckx and colleagues and presented in a five-dimensional model of identity formation (Luyckx et al., 2006; Luyckx et al., 2008). This type of exploration is usually understood in accordance with the definition of exploration proposed by Marcia (1966) – as discovering, seeking, and collecting information about various existing alternatives important to identity (Luyckx et al., 2006; Luyckx et al., 2008). It takes place at the very beginning of identity formation, as a kind of introduction to the decision making process, and can lead to commitment making.

Exploration concerning the already made commitments, undertaken in order to verify and reinforce them, is referred to in the literature as exploration in depth. Under this name it was included in the five-dimensional model of identity formation (Luyckx et al., 2006; Luyckx et al., 2008) and defined as the individual's collecting as complete information as possible about the object and contents of current choices. Likewise, in their three-dimensional model of identity formation, Crocetti, Rubini, and Meeus (2008) describe exploration in depth as the degree to which an individual actively and responsibly copes with the existing commitment, seeking new information about its objects, as well as talking to others about one's current commitment and choices made.

Ruminative exploration (Luyckx et al., 2008) was distinguished in opposition to the two types of exploration mentioned above, and at the same time in order to make the catalog of exploration types complete. It is a maladaptive kind of exploration, connected with negative aspects of psychological functioning and mulling over negative emotions. Distinguishing ruminative exploration is proposed in the five-dimensional model of identity formation (Luyckx et al., 2008). Moreover, Słowińska and Oleszkowicz (2012) demonstrated that both exploration in breadth and exploration in depth can take a ruminative or nonruminative form – regardless of which domain it concerns.

Following Erikson's (1950) assumption that the critical period for identity formation is adolescence as well as Marcia's (1966) assumption that the way to commitment making leads through preliminary exploration and consideration of alternatives, it can be said that what takes place in the early stages of identity formation is exploration in breadth rather than in depth. This is because engaging in exploration in depth presupposes the existence of already made and consciously accepted commitments. In early adolescence (Archer, 1993; Brinthaupt & Lipka, 2002) commitments are not yet made reflectively, and therefore the dimension to focus on if one wants to study the initial stage of identity formation is exploration in breadth.

Marcia (1966) stressed that identity achievement in one area (also called domain) does not necessarily mean the same status in another. It is therefore possible for a person with an identity already formed in the professional domain to be still looking for satisfactory choices in other areas (e.g., romantic relationships), or the other way around. This argues for the need to analyze identity formation and seek its initial stage in various domains.

Various catalogs of domains in which identity is formed are proposed in the literature. In Marcia's classic model it was assumed that identity develops mainly in the ideological and professional spheres. Using the model proposed by Crocetti and colleagues (Crocetti, Rubini, & Meeus, 2008; Crocetti, Rubini, Luyckx, & Meeus, 2008), it is possible to study different domains, but the authors – focusing on the extended process of identity formation – examine mainly the domains important to identity formation in emerging adulthood (work, education, friend relationships, partner relationships). No catalog of domains important to the beginnings of identity formation in early adolescence has been proposed to date.

### **A model of identity exploration in early adolescence**

An attempt to capture early identity exploration with a distinction between different areas of this exploration is the model presented by Kłym and Ciecuch (2015). They followed Luyckx and colleagues (2008) in defining exploration in breadth as discovering, seeking, and collecting information about various alternatives and choice options in areas important to identity, pursued in accordance with personal goals, values, and beliefs and preceding commitment making. Based on theoretical reflections and an analysis of the available literature, they proposed a catalog of 12 areas of identity exploration in early adolescence, operationalized exploration in these areas, and then empirically confirmed the model

(Kłym & Ciecuch, 2015). Their catalog of exploration domains in early adolescence includes areas of life previously taken into account by identity scholars, such as outlook on life (Marcia, 1966), work (Crocetti, Rubini, & Meeus, 2008), or future (Luyckx et al., 2006), as well as domains that may be particularly important to identity in early adolescence and are present in the literature even if they have not been investigated in the existing models of identity formation. The 12 domains of identity exploration are presented in Table 1.

Table 1

*Identity Exploration Domains Distinguished by Kłym and Ciecuch (2015)*

Exploration domain	Description
Physical appearance	Exploration consists in the increasing importance attached to physicality and manifests itself in paying greater attention than before to one's own and other people's appearance. It consists in deliberating on what one looks like and seeking one's own personal style (Brinthaupt & Lipka, 2002).
Free time	Exploration concerns various extra activities – any activities that the teenager engages in or would like to take up in his or her free time. The aim is to find one's own interests and passions and to discover one's fortes (Erikson, 1968).
Family of origin	Exploration in this domain manifests itself in the form of reflections connected with the family of origin and the relations in it. It also involves reflection on whether one fits into that family and whether one is similar to its other members, as well as comparing one's own family with peers' families (McKinney & Renk, 2011).
Work	Exploration consists in reflections on the possible future professional career choices. It encompasses reflections on what the teenager wants to do in his or her adult life, what kind of work he or she would like to do – and all ideas the person has relating to the occupation that would be the most appropriate for him or her in the future (Marcia, 1966).
Boyfriend-girlfriend relationships	Exploration in this domain consists in the teenager's increasing interest in romantic relationships and in paying greater attention to the opposite sex than in earlier developmental stages. It also refers to thinking about what kind of person would be the most appropriate for the teenager as a partner and what kind of relationship the teenager would like to be in with that person (Conolly, Craig, Goldberg, & Pepler, 1999; Furman & Shaffer, 1999).
Own opinion formation	Exploration in the domain of own opinion formation manifests itself in the need for autonomy in decision making, which becomes stronger in adolescence. It thus amounts to the formation of personal views, involving the adoption or rejection of parents' views (Duckett, Raffaelli, & Richards, 1989).
Perception of own place in the life cycle	Exploration concerns the transition from one developmental stage to another, strictly accompanied by a sense of growing out of childhood and moving on to a new – qualitatively new – phase of one's life. Exploration in this domain stems from the teenager's experience of discomfort in situations when others (especially parents) treat him or her like a child (Brinthaupt & Lipka, 2002).
Self-reflection	Exploration in this domain manifests itself in reflecting on oneself and asking oneself questions about who one is. It also involves feeling the need to discover new things about oneself and to get to know oneself (Brinthaupt & Lipka, 2002).

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Future	Exploration consists in considering various directions that the teenager may choose to pursue in life, pondering over how he or she would like to live, supplemented by reflection on what goals are important and what lifestyle would suit him or her in the future (Luyckx et al., 2006; Luyckx et al., 2008).
Future family	This domain is distinct from the family of origin domain described above; it refers to the relationships that the teenager would like to build in the family he or she will start in the future. Exploration in this domain manifests itself in imagining one's future family and the way it will function (Furman & Shaffer, 1999).
Outlook on life	Exploration in this domain manifests itself in seeking information about different systems of values, comparing them, and considering the alternatives available. It also includes reflections enabling the teenager to justify and reinforce his or her beliefs and doubts connected with faith (Boyes & Chandler, 1992; Erikson, 1950).
Attitude toward rules	Exploration manifests itself in reflecting on whether all the rules, instructions, and prohibitions are necessary and make sense. The teenager's exploration in this domain also manifests itself in pondering on what would happen if he or she refused to abide by these established rules (Krettenauer, Colasante, Buchmann, & Malti, 2014; Magnusson, Stattin, & Allen, 1985).

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Previous empirical research confirmed the model distinguishing 12 domains of identity exploration described in Table 1 (Klym & Ciecuch, 2015), but still little is known about the dynamics of exploration in early adolescence. The aim of the present study is to fill this gap.

### Present study

Our main objective is to show the dynamics of identity exploration in early adolescence. We formulated the following hypotheses:

H 1: Identity exploration in particular domains intensifies as adolescents grow up.

According to suggestions present in the literature (Marcia, 1966; Archer, 1993; Erikson, 1959), early adolescence is the time when reflective exploration starts and becomes increasingly intensive. At the same time, it can be expected that individual differences and environmental factors are significant to the level of exploration and play an important role in its intensification. We therefore formulated the following hypothesis:

H 2: There is significant interpersonal diversity in (a) the intensity of exploration at the beginning and (b) the amount of change in the intensity of exploration.

Moreover, according to Marcia (1966), identity in particular domains can be formed with different degrees of intensity and at different times, which also refers to the exploration process as the first step toward identity formation. We therefore expected that the intensification of identity exploration (postulated in

hypothesis 1) and interpersonal differentiation (postulated in hypotheses 2a and 2b) may be different in different domains of exploration.

The present study has an exploratory character; consequently – due to the lack of previous research on the dynamics of identity exploration – we did not formulate precise hypotheses concerning differentiation across domains. However, we used an analytic model that will make it possible to show the specificity of the dynamics in each of the domains in an exploratory manner.

## METHOD

### Data analysis method

We analyzed the change in the intensity of exploration using a latent growth curve model (LGC; Byrne, 2010). LGC allows for a relatively precise description of change not only at the group level but also at the level of interindividual differences (Hser, Hoffman, Grella, & Anglin, 2001). This is because LGC comprises a within-person model, showing individual change within each person, and a between-person model, depicting differences between the participants. LGC estimation in a SEM model is based on the analysis of means and the covariance matrix, which makes it possible to separate the group effect (based on the mean) from the effect of particular individuals (based on covariance). The observable variables are the results of three measurements of a given variable (e.g., identity exploration in the physical appearance domain), and the latent variables are “the initial level of a given variable” (intercept) and “change” (slope). What makes such an interpretation of the variables possible is a specific system of conditions and limitations imposed on factor loadings and the treatment of the LGC model as a factorial model with all factor loadings known (Byrne, 2010). The LGC model for three measurements, assuming the linearity of change, is presented in Figure 1.

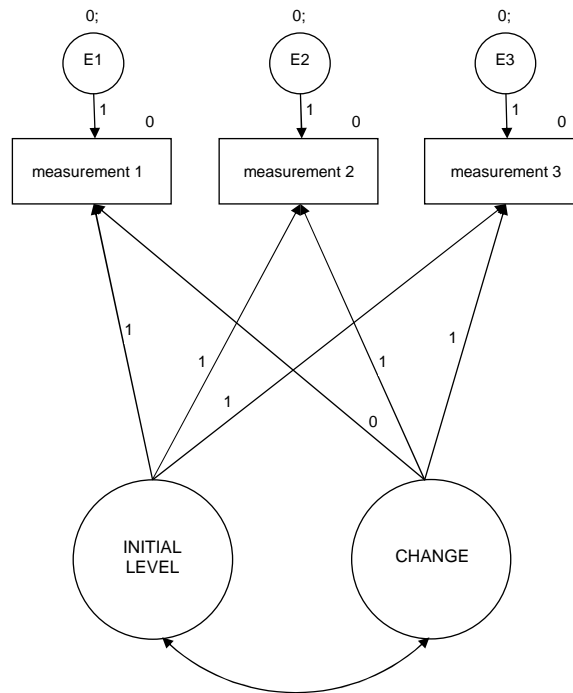


Figure 1. Latent growth curve model for three measurements (based on: Ciecuch, 2013). The latent variables are presented in circles and the observable variables in rectangles; E – measurement error.

In accordance with the procedure described by Byrne (2010), we performed an interpretation of the LGC model as follows:

1. Analysis of model fit indices (preliminary analysis). This is the first step, pointing to the need to move on to further stages of analysis. To assess the goodness-of-fit of the latent growth curve model, we used the following indices: (1) CFI (*Comparative Fit Index*), (2) RMSEA (*Root Mean Square Error of Approximation*). We adopted the standard acceptability criteria for the model to be regarded as well-fitted to the data, also used in confirmatory factor analysis (Hu & Bentler, 1999; Marsh, Hau, & Wen, 2004), namely: CFI > .90 and RMSEA < .08.

2. Analysis of longitudinal change in the sample (testing hypothesis 1). This analysis makes it possible to answer the question of whether the intensity of the measured variables changes in time. The indicator of this change is the significance of the mean of the “change” latent variable. In the case of the study described above, longitudinal change means that the intensity of identity exploration changed over time. Due to the relatively short duration of the study (1.5 years)



and due to the participants' developmental stage (early adolescence), we tested linear growth.

3. Analysis of interpersonal differentiation at the outset (testing hypothesis 2a). This analysis makes it possible to answer the question of whether all participants have the same level of the measured variable in the first measurement or whether they differ from one another in this respect. The indicator of this differentiation is the significance of variance in the "initial level" latent variable. This differentiation means that individuals differed significantly from one another in the intensity of exploration at the moment of the first measurement.

4. Analysis of interpersonal differentiation in terms of the identified change (testing hypothesis 2b). This analysis makes it possible to answer the question of whether change takes place in the same way in all participants or whether there are differences between them in this respect. The indicator of this differentiation is the significance of variance in the "change" latent variable. What this kind of differentiation means is that individuals differed from one another significantly in terms of how the intensity of their exploration changed in time.

### Participants

The sample consisted of 327 adolescents and was balanced in terms of gender (45% of the participants were girls). During the first of the three measurements, the participants were 11 to 15 years old ( $M = 13.26$ ,  $SD = 1.20$ ) and were elementary and middle school students. Their parents gave written consent for their children to take part in the study. The participants took part in three measurements performed at half-year intervals (the first measurement was performed in spring 2013, the second one in autumn 2013, and the third one in spring 2014). The measurements were performed by a trained researcher, on a group basis, during classes at school.

### Measure

We administered the *Early Identity Exploration Scale* (EIES; Kłym & Ciecuch, 2015), which was constructed to measure the exploration that early adolescents engage in in the 12 domains presented in Table 1.

Each of the scales has the following form: (1) a description of two people who differ from each other in terms of the intensity of exploration in a particular domain; (2) a set of items that the participants is supposed to rate using a 5-point Likert scale (from *very rarely or never* to *very often or always*).

The instrument consists of 66 items, and its form is adjusted to the participant's gender. An example – a description and items relating to the domain of own opinion formation – is presented in Figure 2.

Lucas notices, more often than before, that his opinion on many issues is different than his parents' opinion. When he agrees with adults, he admits they are right; when he disagrees, he shows it.  
Tom agrees with his parents on many issues and very rarely has different opinions. He doesn't oppose his parents and rarely considers whether his parents could be wrong.

Now, please describe yourself. Do you often have a different opinion than adults do? Respond to each sentence by putting an X in the appropriate column of the table below.

	Very rarely or never	Rarely	Sometimes	Often	Very often or always
30. Before I follow my parents' directions, I consider whether they make sense.					
31. I wonder if my parents are always right.					
32. I have different opinions from my parents.					
33. I try to convince my parents of my opinion.					
34. If I have a different opinion than adults do, I show it.					
35. I feel opposition to what my parents say.					

Figure 2. An example scale of the EIES; domain: own opinion formation; version for boys.

The reliability of particular scales, established based on the Cronbach's alpha coefficient, was from acceptable to high in all measurements. We obtained results from  $\alpha = .62$  (for the domain of attitude toward rules in the first measurement) to  $\alpha = .89$  (for the self-reflection domain in the second measurement).

## RESULTS

We performed latent growth curve analysis for each of the 12 domains of identity exploration. In the case of each domain, at least one and in most cases

both of the indices mentioned were acceptable. Only in the case of three domains (physical appearance, boyfriend-girlfriend relationships, perception of own place in the life cycle) did RMSEA reach the threshold of acceptability (.08), but it was also in these cases that CFI suggested that the model can be accepted. We therefore decided that the model is sufficiently fitted in all domains, which enabled us to move on to further stages of the analysis of change. The exact values of goodness-of-fit indices (CFI, RMSEA) are presented in Table 2.

Linear longitudinal change (hypothesis 1) in each of the analyzed domains was determined based on the sign and significance of the mean of the “change” latent variable. In the case of the domains of physical appearance, work, boyfriend-girlfriend relationships, and outlook on life, the change was significant (significant positive mean), which means there is a significant intensification of exploration in these domains. The nonsignificant results for the remaining domains attest to the fact that the intensity of exploration in those domains did not change significantly with the passage of time in the whole sample.

In some domains, variance in the “change” latent variable was significant even though the mean for this variable was not. These domains were: own opinion formation, self-reflection, future, and attitude toward rules. This means that in these domains significant change was not found for the whole sample, but it is possible that such change is the case for some of the participants, since participants differed from one another in the course of the change in the level of exploration in these domains.

As indicated in Table 2, we found interpersonal differentiation in the initial level of exploration (hypothesis 2a) in all 12 domains, since variance in the “initial level” variable is significant in each domain. This means there were significant differences between adolescents in the level of exploration at the beginning of the study.

In accordance with the procedure described in the Data analysis method section, the fourth step in data interpretation is the verification of whether interpersonal differentiation in terms of the identified change exists in all the domains in which a change in the level of exploration was confirmed (hypothesis 2a). Of the domains mentioned above in which a significant longitudinal change in the level of exploration was confirmed, significant interpersonal differentiation was confirmed (variance in the “change” latent variable was significant) in the domains of physical appearance, work, and outlook on life. This means that even though in all participants there is an intensification of exploration in these domains, the participants differ from one another in the degree of this intensification.

Table 2

*Results of Latent Growth Curve Analysis for 12 Identity Exploration Domains*

Domain of identity exploration	Model fit indices				Mean		Variance	
	$\chi^2$	<i>p</i>	CFI	RMSEA	Initial level	Change	Initial level	Change
Physical appearance	11.122	.00	.97	.18	2.48***	.10***	.32***	.06*
Free time	1.035	.31	1	.01	2.99***	-.03	.41***	.01
Family of origin	0.585	.44	1	0	2.22***	.02	.30***	.04
Work	0.661	.42	1	0	3.05***	.11***	.37***	.06*
Boyfriend-girlfriend relationships	6.483	.01	.98	.13	3.13***	.08**	.50***	.07
Own opinion formation	0.012	.91	1	0	3.15***	-.03	.40***	.06*
Perception of own place in the life cycle	8.479	.00	.98	.15	3.37***	-.04	.37***	.02
Self-reflection	0.620	.43	1	0	2.71***	.04	.57***	.13***
Future	0.984	.32	1	0	3.15***	.05	.44***	.08**
Future family	1.285	.26	1	.03	2.91***	-.02	.49***	.05
Outlook on life	0.971	.32	1	0	2.36***	.12***	.20***	.10***
Attitude toward rules	0.000	.99	1	0	2.71***	.03	.20***	.08**

Note. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

Based on two criteria: (1) the significance of exploration intensity and (2) interpersonal differentiation in the course of the intensification of exploration (if any), the domains can be divided into four types. They are presented in Table 3.

Table 3

*Differentiation of Domains According to the Course of the Exploration Process*

	Exploration intensifies in the whole sample	Exploration does not intensify in the whole sample
There is differentiation among adolescents in the intensity of change	– physical appearance – work – outlook on life	– own opinion formation – self-reflection – future – attitude toward rules
There is no differentiation among adolescents in the intensity of change	– boyfriend-girlfriend relationships	– family of origin – future family – perception of own place in the life cycle – free time

In the domains of physical appearance, work, and outlook on life there is an intensification of exploration, which means that, regardless of how intensely the teenager looks for identity in these domains at the beginning of the developmental period in question, it can be expected that exploration in these domains will be increasingly strong. At the same time, there is significant differentiation among adolescents in the dynamics of exploration intensity.

### DISCUSSION

Identity has been one of the most intensely studied issues recently, not only in psychology but also in sociology and cultural anthropology. Despite the more and more frequent interdisciplinary debates and studies, it still remains unclear how identity develops and how it changes. The dynamics of identity is related both to individual needs and to the content that defines a person and gives a sense of autonomy. The significance of identity content evolves in the course of life – as a result of both personal development and functioning in an intensively changing context: environmental as well as cultural. The changing system of socially valued references as well as circumstances and events in life play the key role in maintaining or changing what is valuable and satisfactory for the individual.

Due to the contemporary phenomenon of the identity formation process being extended (Schwartz, Côté, & Arnett, 2005), the studies reported in the literature usually focus on commitment (Crocetti, Rubini, & Meeus, 2008) – not made by young people, for various reasons. Much less attention is devoted to the process of exploration. The present article was meant to fill this gap and was an attempt to expand the existing knowledge on the dynamics of exploration at the initial stage of identity formation.

We adopted a catalog of 12 domains in which the exploration process begins in early adolescence, proposed by Klym and Ciecuch (2015), and investigated the dynamics of this process in a longitudinal study. Based on the analyses performed, the following conclusions can be formulated:

First, it turned out that adolescents differ from one another in the level of exploration at the outset (in the first measurement) in all 12 domains. The cause of this differentiation may be individual differences (e.g., personality traits) as well as differences in the social and family situation.

Second, although the study covered a relatively short time (1.5 years), certain patterns could be observed in the dynamics of changes. Exploration is thus

a dynamic construct, which changes fairly intensively in a relatively short span of time in early adolescence.

Third, the process of exploration does **not** take place in the same way in every domain (see Table 3). The intensification of exploration different across individuals occurs in the domains of physical appearance, work, and outlook on life. It should be noted that work and outlook on life are domains already distinguished by Marcia (1966), which means they belong to a kind of canon of analyzed areas. As regards physical appearance, as a domain with an equally high level of exploration in the analyzed period, it may be related both to developmental processes (Brinthaupt & Lipka, 2002) and to cultural ones (Brooks-Gunn & Graber, 1999).

In boyfriend-girlfriend relationships we also observed an intensification of exploration in the analyzed period, but the participants do not differ from one another in the dynamics of this intensification, which may attest to the commonness of exploration in this dimension and to the importance of this domain (Furman & Shaffer, 1999). It should be added that it is one of the domains already distinguished by Marcia (1966), and that it is consistent with the coevolution of entering into romantic relationships with identity formation in adolescence, postulated in theories of psychosocial development and attachment (Kerpelman et al., 2012).

In the domains of own opinion formation, self-reflection, future, and attitude toward rules we found no significant intensification of exploration at the group level, but we did find significant differentiation in the course of this process among the participants. Thus, these are domains in which the intensification of exploration takes place less commonly than in those mentioned previously. In the domains of family of origin, future family, perception of own place in the life cycle, and free time we observed neither intensification of exploration nor interpersonal differentiation in the dynamics of this process. Thus, these are domains in which exploration in the analyzed period basically did not change. Despite the fact that changes in the perception of the family of origin in adolescence compared to childhood are emphasized in the literature (Oleszkowicz & Senejko, 2011), perhaps the analyzed period was not sufficient for significant changes to be observed when it comes to the intensification of identity exploration. In the case of the remaining domains in which the expected increase in exploration was not observed – free time and perception of own place in the life cycle – already in the initial stage of the analyzed period exploration was more intense than in other domains.

The above conclusions support Marcia's thesis about the diverse formation of identity in its various domains and highlight the validity of analyzing identity as differentiated across domains. Relationships with the opposite sex and entering into first romantic relationships turns out to be the only universal kind of content equally important to all early adolescents.

Showing the regularities and differences in the exploration process, the study provokes a number of questions to be answered in further research. The question that seems to be particularly important is what course of the exploration process increases the likelihood of making a relatively permanent commitment, characteristic of mature identity. Perhaps exploration and its intensification are more adaptive in some areas than in others. Early identification of exploration and its intensification in specific domains that are important to well-being and identity achievement or make it possible to predict adaptation problems could be of not only theoretical but also applicative significance.

## REFERENCES

- Archer, S. L. (1993). Identity status in early and middle adolescents: Scoring criteria. In J. E. Marcia, A. S. Waterman, D. R. Matteson, S. L. Archer, & J. L. Orlofsky (Eds.), *Ego identity: A handbook for psychosocial research* (pp. 177-204). New York: Springer-Verlag.
- Boyes, M. C., & Chandler, M. (1992). Cognitive development, epistemic doubt, and identity formation in adolescence. *Journal of Youth and Adolescence, 21*, 277-304.
- Brinthaupt, T. M., & Lipka, R. P. (2002). *Understanding early adolescent self and identity: Applications and interventions*. Albany, NY: State University of New York Press.
- Brooks-Gunn, J., & Graber, J. A. (1999). What's sex got to do with it? The development of health and sexual identities during adolescence. In R. J. Contrada & R. D. Ashmore (Eds.), *Self, social identity, and physical health: Interdisciplinary exploration* (pp. 155-182). New York: Oxford University Press.
- Brzezińska, A. I. (2006). Dzieciństwo i dorastanie: korzenie tożsamości osobistej i społecznej. In A. W. Brzezińska, A. Hulewska, & J. Słomska (Eds.), *Edukacja regionalna* (pp. 47-77). Warsaw, PL: Wydawnictwo Naukowe PWN.
- Brzezińska, A. I., Czub, T., Hejmanowski, Sz., Rękosiewicz, M., Kaczan, R., & Piotrowski, K. (2012). Determinants of identity formation during the transition from adolescence to adulthood. *Culture and Education, 5*(91), 5-27.
- Byrne, B. M. (2010). *Structural equation modeling with Amos: Basic concepts, applications, and programming* (2nd ed.). New York, NY: Taylor and Francis Group.
- Cieciuch, J. (2013). *Kształtowanie się systemu wartości od dzieciństwa do wczesnej dorosłości*. Warsaw, PL: Liberi Libri.
- Connolly, J., Craig, W., Goldberg, A., & Pepler, D. (1999). Conceptions of cross-sex friendships and romantic relationships in early adolescence. *Journal of Youth and Adolescence, 28*, 481-493.

- Crocetti, E., Rubini, M., Luyckx, K., & Meeus, W. (2008). Identity formation in early and middle adolescents from various ethnic groups: From three dimensions to five statuses. *Journal of Adolescence*, *37*, 983-996.
- Crocetti, E., Rubini, M., & Meeus, W. (2008). Capturing the dynamics of identity formation in various ethnic groups: Development and validation of three-dimensional model. *Journal of Adolescence*, *31*, 207-222.
- Duckett, E., Raffaelli, M., & Richards, M. H. (1989). Taking care: Maintaining the self and the home in early adolescence. *Journal of Youth and Adolescence*, *18*, 549-566.
- Erikson, E. H. (1950). *Childhood and society*. New York, NY: Norton.
- Erikson, E. H. (1959). *Identity and the lifecycle*. New York, NY: International Universities Press.
- Erikson, E. H. (1968). *Identity: Youth and crisis*. New York, NY: Norton.
- Furman, W., & Shaffer, L. A. (1999). A story of adolescence: The emergence of other-sex relationships. *Journal of Youth and Adolescence*, *28*, 513-522.
- Hser, Y., Hoffman, V., Grella, C., & Anglin, D. (2001). A 33-year follow-up of narcotics addicts. *General Archives of Psychiatry*, *58*, 503-508.
- Hu, L., & Bentler, P. M. (1999). Cut off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*(1), 1-55.
- Kerpelman, J. L., Pittman, J. F., Saint-Elloi Cadely, H., Tuggle, F. J., Harrel-Levy, M. K., & Adler-Baeder, F. M. (2012). Identity and intimacy during adolescence: Connections among identity styles, romantic attachment and identity commitments. *Journal of Adolescence*, *35*, 1427-1439.
- Kłym, M., & Ciecuch, J. (2015). The Early Identity Exploration Scale – A measure of initial exploration in breadth during early adolescence. *Frontiers in Psychology*, *6*(533). DOI: 10.3389/fpsyg.2015.00533
- Krettenauer, T., Colasante, T., Buchmann, M., & Malti, T. (2014). The development of moral emotions and decision-making from adolescence to early adulthood: A 6-year longitudinal study. *Journal of Youth and Adolescence*, *43*, 583-596.
- Luyckx, K., Goossens, L., Soenens, B., & Beyers, W. (2006). Unpacking commitment and exploration – Preliminary validation of an integrative model of late adolescent identity formation. *Journal of Adolescence*, *29*, 361-378.
- Luyckx, K., Schwartz, S., Berzonsky, M., Soenens, B., Vansteenkiste, M., & Smits, I., (2008). Capturing ruminative exploration: Extending the four dimensional model of identity formation in late adolescence. *Journal of Research in Personality*, *42*, 58-82. DOI: 10.1016/j.jrp.2007.04.004
- Magnusson, D., Stattin, H., & Allen, V. L. (1985). Biological maturation and social development: A longitudinal study of some adjustment processes from mid-adolescence to adulthood. *Journal of Youth and Adolescence*, *14*, 267-283.
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology*, *3*, 551-558.
- Marsh, H. W., Hau, K.-T., & Wen, Z. (2004). In search of golden rules: Comment on hypothesis-testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing Hu and Bentler's (1999) findings. *Structural Equation Modeling*, *11*, 320-341.
- McKinney, C., & Renk, K. (2011). A multivariate model of parent-adolescent relationship variables in early adolescence. *Child Psychiatry and Human Development*, *42*, 442-462.
- Meeus, W., Iedema, J., & Maassen, G. H. (2002). Commitment and exploration as mechanisms of identity formation. *Psychological Reports*, *90*, 771-785.



- Oleszkowicz, A., & Senejko, A. (2011). Dorastanie. In J. Trempała (Ed.), *Psychologia rozwoju człowieka* (pp. 259-286). Warsaw, PL: Wydawnictwo Naukowe PWN.
- Schwartz, S. J., Côté, J. E., & Arnett, J. J. (2005). Identity and agency in emerging adulthood: Two developmental routes in the individualization process. *Youth & Society, 37*, 201-229.
- Słowińska, A., & Oleszkowicz, A. (May 2012). *Propozycja modyfikacji Modelu Podwójnego Cyklu Formowania się Tożsamości Luyckxa i współpracowników*. Paper presented at the 23rd Polish National Conference in Developmental Psychology in Zielona Góra.
- Stephen, J., Fraser, E., & Marcia, J. E. (1992). Moratorium-achievement (Mama) cycles in lifespan identity development: Value orientations and reasoning system correlates. *Journal of Adolescence, 15*, 283-300.
- Tesch, S., Whitbourne, S. K. (1982). Intimacy and identity status in young adults. *Journal of Personality and Social Psychology, 43*, 1041-1051.
- Whitbourne, S. K. (2002). *The aging individual: Physical and psychological perspective* (2nd ed.). New York: Springer.
- Willett, J. B., & Sayer, A. G. (1994). Using covariance structure analysis to detect correlates and predictors of individual change over time. *Psychological Bulletin, 116*, 363-381.



The preparation of the English version of *Roczniki Psychologiczne (Annals of Psychology)* and its publication in electronic databases was financed under contract no. 723/P-DUN/2016 from the resources of the Minister of Science and Higher Education for the popularization of science.