

Identity Before Adulthood

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Identity Before Adulthood

The Identity of Upper Secondary
School Students in Poland



Poznań 2017

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INTRODUCTION



An important change in the period of adolescence, which makes a difference from the point of view of identity formation, is the beginning of education in a new school. What this means for many students is not only contact with new educational opportunities and a combination of study with various forms of work, including volunteer work. It also becomes necessary to enter into contact and individual relations with new peers and to build one's position within new peer groups. Changing the place of residence and starting to rent a room or live in a dormitory or commuting to school every day entails a reorganisation of the day and the week.

The new educational offer is accompanied by many new requirements and expectations, mainly on the part of teachers and parents, but also on the part of adults outside the family or school, including employers, instructors, or advisors. These new expectations are connected with the efforts of adults, responsible for education, to ensure that the young person achieves an appropriate level of psychosocial maturity as quickly as possible. This refers particularly to independence in decision making and responsibility for oneself. Students are also expected to gain adequate mastery of various skills that will soon be indispensable in adult life, such as short-term and long-term planning, performing obligations on time, managing their own finances, organising their household, organising study, work, and leisure, as well as finding between the satisfaction of needs and the fulfilment of social expectations connected with family, professional, and public roles.

How a teenager's identity is formed and what store of knowledge and skills – as instruments of getting to know oneself and the environment – a teenager has at the beginning upper secondary school is largely determined by his or her curiosity and openness, interests, willingness to learn, and susceptibility to change. On the other hand, a rich and diverse offer of activities both in the

school environment and outside it (in the local community and also in the media, including the Internet) creates an opportunity to acquire new competencies, expand knowledge about oneself and the world, enrich and modify the contents of self-beliefs, and transform the previously developed sense of identity. The larger the discrepancy between the amount of a teenager's personal resources at the beginning of the new school and the environment's requirements and opportunities, the greater is the need for an intermediary, sensitive to the teenager's needs but also capable of bringing out his or her potential (in the second stage of adolescence this role is less and less often performed by parents and more and more often by teachers or other adults).

In extreme cases, two psychologically opposite situations are possible. The first situation involves a high level of diverse competencies in a teenager as a result of development in childhood and in the first stage of adolescence, plus a school and out-of-school environment that is either homogeneous or inaccessible as far as opportunities are concerned. The second situation involves a low level or even a lack of certain competencies that should have been acquired and developed earlier, and at the same time a school and out-of-school environment that abounds with opportunities and, more importantly, that is heterogeneous. In the former case, there is a lack (or little diversity) of opportunities to use the already possessed competencies or to master new ones and reshape the previously developed identity into a more mature form. In the latter case, the teenager at the threshold of adulthood lacks instruments to make use of the environment's opportunities. Either of these situations demands a different course of action from the teenager's significant others and a different organisation of his or her learning environment, both physical and social.

The results presented in the book¹ show a considerable diversity of the tested students in terms of identity types (statuses), and the type of status is an indicator of which phase of the struggle with identity crisis a person is in.

¹ In the pilot study conducted by our team in 2012, the participants were students in early and late adolescence, students and non-students, as well as employed and unemployed people in emerging and early adulthood, aged from 12 to nearly 40 years. In the main study, conducted in 2012-2015, the participants were only young people in the second phase of adolescence and at the beginning of emerging adulthood – aged 16-21, attending different types of upper secondary schools (Appendix 1 presents the characteristics of different types of Polish upper secondary schools). The results analysed in this book were obtained in research conducted in 2012-2015 (for a description of the research plan and the tested groups – see Chapter 4). The OPUS 2 research project that this research was part of, titled *Mechanisms of Identity Formation During the Transition From Adolescence to Adulthood: The Regulatory Role of Self-Conscious Emotions*, financed by the National Science Centre in Cracow, received a positive opinion from the Board of Ethics for Research Projects at the Institute of Psychology of Adam Mickiewicz University in Poznań.

Moreover, we analysed variables regarded as important correlates (in cross-sectional comparisons) or determinants (in longitudinal comparisons) of identity statuses. These variables were divided into four groups:

- cognitive variables: the style of processing identity problems and, additionally, the need for cognitive closure and the level of right-wing authoritarianism
- emotional variables: the levels of three basic self-conscious emotions, significant to psychosocial functioning: shame, guilt, and pride, as well as shame rumination, difficulties in emotion regulation, emotion regulation strategies, and dissociative experiences
- social variables: life orientation and type of social participation, as well as, additionally, social capital and general satisfaction with life

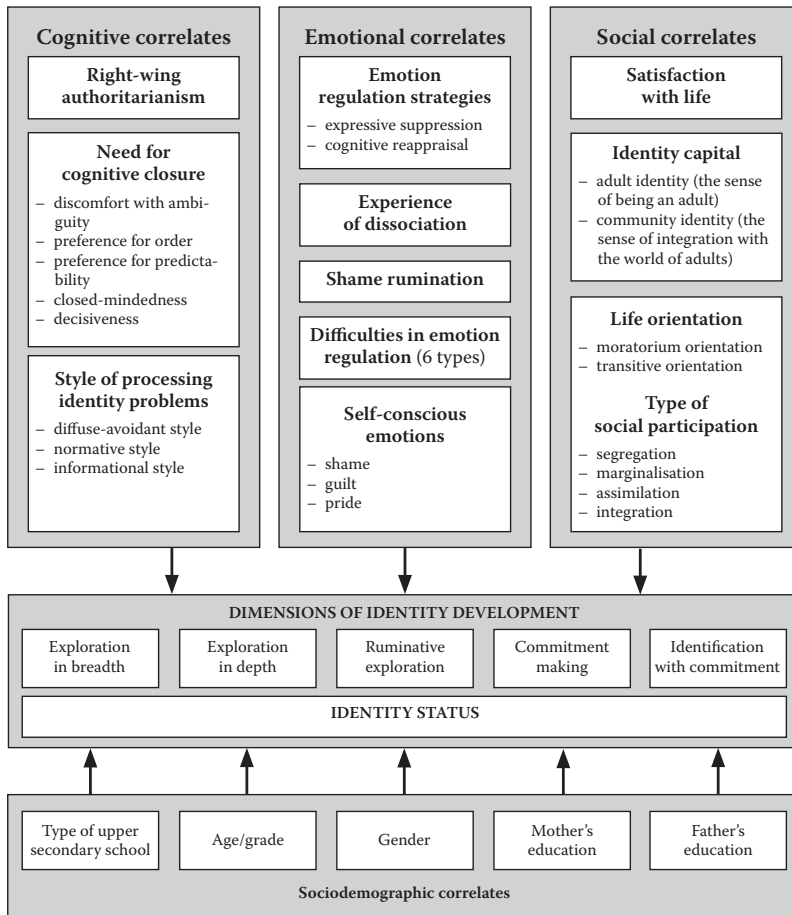


Figure 1. Areas investigated: identity status and its correlates

- sociodemographic variables: age/grade, gender, type of upper secondary school (general or vocational curriculum), as well as mother's and father's education.

Figure 1 shows all the measured variables and the expected relations between them.

The questions we sought to answer were the following:

1. What identity statuses (types) are found in students of different types of upper secondary schools at the beginning (initial capital) and at the end of their education in these schools (final capital)?
2. Do type of upper secondary school, student's age (grade) and gender, as well as their mothers' and fathers' education:
 - differentiate the type of identity status in the first and last semesters in each grade (Grades 1, 2, and 3 – after two semesters in each) as well as after the second grade (after four semesters of study) and after the third grade (after six semesters of study) (this question concerns: individual differences between students of different types of schools in consecutive stages of education, differences between schools and between students in schools representing the same school type, and intraschool differences)?
 - differentiate the type of changes of identity status between the first and the last semesters (the question concerns the increase, decrease, or no change in interschool and intraschool differences)?
3. Do the levels of cognitive, emotional, and social correlates of identity statuses:
 - differentiate the type of identity status in the first and last semesters (the question concerns interschool and intraschool differences)?
 - differentiate the type of changes of identity status between the first and the last semesters of study (the question concerns the increase, decrease, or no change in interschool and intraschool differentiation)?
 The applied research design was complex (see description in Chapter 4) and enabled making several types of comparisons: cross-sectional (analysis of results in Chapter 5), time-lag (analysis of results in Chapter 6), and longitudinal (analysis of results in Chapter 7).

The applied research design was complex (see description in Chapter 4) and enabled making several types of comparisons: cross-sectional (results analysed in Chapter 5), time-lag (results analysed in Chapter 6), and longitudinal (results analysed in Chapter 7).

Regardless of the type of comparisons, the starting point was the description of the identity statuses identified in the compared groups. They showed

which phase of identity crisis resolution the students were in: precrisis, crisis, or postcrisis. The second step was to determine the role of age (grade) and gender, the type of upper secondary school, as well as mother's and father's education as factors differentiating participants with different identity statuses. It was not until the third step that we analysed the role of psychological factors – cognitive, emotional, and social – in the formation of a particular identity status depending on the type of school.

Our previous analyses² revealed that the differentiating role of students' age and gender and of their mothers' and fathers' education level, even if statistically significant, was small. What was much more significant was the type of upper secondary school. Partial analyses also revealed significant associations of some cognitive, emotional, and social variables with the levels of particular dimensions of identity development and with the type of identity status determined on the basis of their configuration³. The research design we applied, enabling as many as three types of comparisons – cross-sectional, time-lag, and longitudinal (making it possible to keep track of changes and to identify their type) – on the same set of data, made it possible to obtain reliable answers to the questions posed.

² Cf.: Brzezińska, 2013; Brzezińska, Czub, & Piotrowski, 2014; Brzezińska & Piotrowski, 2016; Brzezińska, Rękosiewicz, & Piotrowski, 2016; Brzezińska, Rękosiewicz, Syska, & Piotrowski, 2016; Czub & Brzezińska, 2013; Jankowski, 2013; Jankowski & Rękosiewicz, 2013; Kaczan, Brzezińska, & Wojciechowska, 2013; Piotrowski, 2013; Rękosiewicz, 2013b; Rękosiewicz, 2014.

³ Analyses of some of the results obtained in research conducted in 2012-2015 were published in the monograph titled *Ścieżki wkraczania w dorosłość [Paths Into Adulthood]* (ed. by Brzezińska & Syska, 2016).

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Anna I. Brzezińska

Poznań, September 2017

Chapter 1

IDENTITY AND GROWING UP TO ADULTHOOD



1. Introduction

The numerous, rapid, increasingly dynamic and, consequently, increasingly less predictable political, economic, and sociocultural changes that have been taking place for nearly twenty years considerably increase the complexity of the social reality in which new generations of children and young people enter adulthood. These changes have significant influence on what kind of family, school, and local environment is the setting for teenagers' and young adults' identity formation and on what course this process takes. They also have an influence on what roles assigned only to adults so far or what socially new "adult" roles are offered to young people or created for them and when, and on when young people take on these roles. On the other hand, the postponement of taking on adult roles, observed in many countries, may be one of the causes of increasing difficulties with the formation of a relatively stable and mature sense of identity (Kröger, 2007) – and the achievement of a relatively stable sense of identity at the threshold of adulthood is one of the most important developmental tasks in the second phase of adolescence (Erikson, 1950).

2. The Social Context of Identity Development

Personality traits, including the level of social and personal identity, become particularly important in critical moments of the individual's life. These moments certainly include all transitions between phases of life (Smykowski,

2012), especially between childhood and adolescence, at the age of 10-12, or between adolescence and adulthood, at the age of 18-20. These two key stages of transition – from childhood to adolescence and from adolescence to adulthood – involve numerous changes in physical well-being as well as in the quality of psychological and social functioning. They are accompanied by considerable changes in the closest environment, such as a change of relationships within the family, new expectations on the part of household members and new responsibilities towards the family, a change of school and a change of the mode of education (e.g., from general to vocational or a combination of study with various forms of work), sometimes a change of the place of residence that this entails, taking up new forms of activity outside the family and school and thus beyond the control of the hitherto closest adults, including various forms of employment.

The course and effects of identity formation largely depend on the setting in which this process takes place. At the threshold of adulthood, this setting comprises the social environment, constituted by the circle of family and friends and highly familiar from early childhood; the educational environment, particularly institutional, similarly familiar when it comes to the rules of functioning; and the completely new and unfamiliar work environment. Changes in the labour market, particularly those concerning the forms of employment and the demand for new kinds of specialists, unknown a few years ago, in various fields of life not only result in a multiplicity of options to choose from but also multiply the possibilities of planning one's own life and paths of development. This abundance of opportunities, characteristic of late modern societies, puts the young person in a situation of conflict. On the one hand, the young person may want to postpone his or her entry into adulthood, preferring to analyse these opportunities, try them out, or take up the challenge they present; on the other hand, it is much earlier now than it used to be that one has to quickly define the style and path of one's life or to choose among the options available, which one is not always prepared to do in a competent way.

Today's fluid, changeable, and therefore unpredictable environment requires everyone, including adolescent students, to be ready to change and to constantly learn and quickly switch to new ways of acting. At the same time, what it also requires is the ability to maintain the direction of one's activity despite the changes around. This means setting one's life priorities based on a vision of what one wants to do in life "in general" and sketching a plan of one's life as well as choosing what one wants to do in the nearest future and building flexible short-term plans (Brzezińska, Kaczan, & Rycielska, 2010).

The high dynamics and diversity of changes in the environment of contemporary teenagers can be looked at in two ways. On the one hand, it can be

treated as a kind of challenge and developmental opportunity; on the other, it can be regarded as a risk factor – the less prepared young people are to examine opportunities and make choices on their own, the more serious the risk becomes. The family and school educational environment remains under the influence of the changes taking place in the social environment (Figure 1), which in turn stem from broader cultural trends related to globalisation processes. New opportunities and their much greater availability than in the past – both direct and indirect, via the Internet – open up new areas to explore and face challenges in as well as encourage trying out and experimenting.

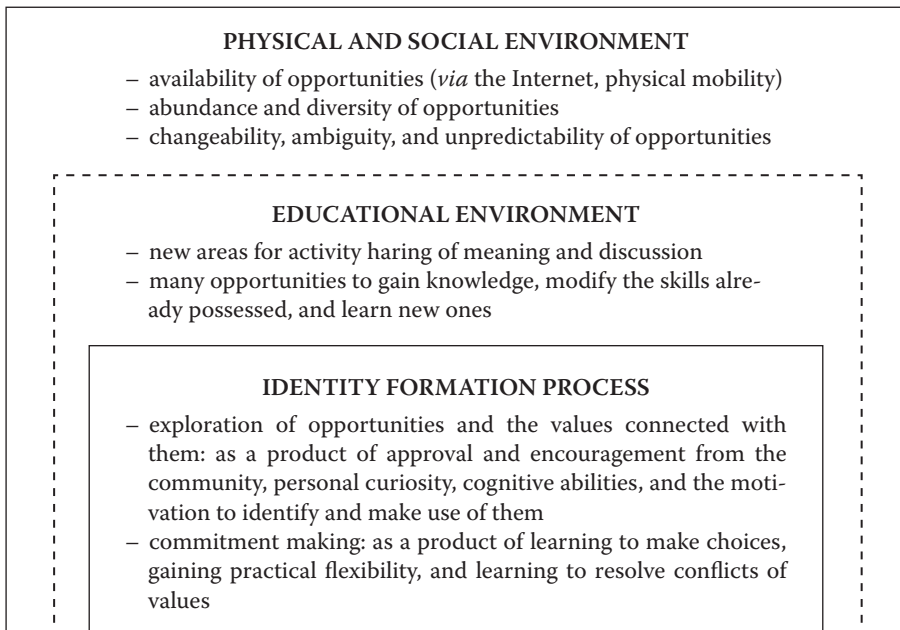


Figure 1. Changes in the environment as factors supporting identity formation

At the same time, however, especially when the ability to make decisions in conditions that are not fully defined has not previously been developed, an excess of opportunities can cause a sense of being lost and confused in the world of different – frequently contradictory – values, ideas, and activity proposals connected with them. This confusion may manifest itself in a person dividing his or her activity among too many fields, in excessive focus on “seizing the opportunity,” and in making choices without reflection on their possible outcomes. Finally, also as a result of a lack of critical reflection, it is visible in the development of maladaptive strategies of coping with the excess or unpredictability of changes, such as resistance to change, denial of change,

or various physical and symbolic strategies of escaping from situations when choice has to be made.

Research shows that people with so-called self-authoring personality (Brygoła, 2016), even with critical but positive attitudes towards changes in the environment and towards the phenomenon of globalisation (Senejko & Łoś, 2016), emotionally mature people with a specific system of values (Helson & Srivastava, 2001), with a sense of timely occurrence of various events in their life (Brzezińska, Czub, Hejmanowski *et al.*, 2012), and, finally, individuals with formed identity (Piotrowski, 2013) more frequently have a sense of satisfaction with life and cope better in such rapidly changing environments (Smykowski, 2012). From this point of view, all psychosocial competencies developed in childhood and adolescence can be treated as individuals' personal capital, largely determining their openness and willingness to actively seek, take up, and participate in the realisation of opportunities offered by the environment or to create such opportunities on their own and in cooperation with others.

In adolescence, it is mainly school and out-of-school education that develop young people's competencies. If we want school education to be not only effective in achieving the goals that have been set but also ethical (i.e., respectful of students' and teachers' systems of values), it must be based on person-to-person interactions, characteristic for the model of cooperation (Brzezińska & Appelt, 2013). It is only from this perspective that certain questions become important: namely, the questions of what knowledge teachers have about their students, what picture of the students they have in their minds, what stereotypes (positive and negative) distort their perception of students' competencies and potential, and, finally, whether and how they are able to modify their teaching methods, including the ways of motivating learners and evaluating the effect of education according to students' perceived personality traits (also identity characteristics) and developmental needs.

In other words, education can be customised only when it has been personalised: that is, when the teacher is willing and able to recognise different "types" among his or her students and to use this knowledge to propose and modify his or her educational offers as well as to organise – preferably together with the students – the physical and social learning environment. The key condition of personalised education is the opportunity for students to make choices, and not only from among the options offered by the school or by a particular teacher. Choice also means the possibility of opting for extracurricular opportunities as well as creating opportunities for oneself and for one's peers.

Studies of people in late adolescence and early adulthood are fairly numerous, but few of them concern young people who have chosen vocational education and combine study with work, or people who completed compulsory

education early and took up systematic employment in the final phase of adolescence. The numerous studies whose participants were university students (cf. Piotrowski, Kaczan, & Rękosiewicz, 2013) cannot be treated as a reliable source of knowledge about the transitional phase between adolescence and adulthood.

Higher education, especially full-time and often involving either living together with parents or being maintained by them to a great extent, generates a characteristic environment conducive to moratorium. According to Krystyna Szafranec (2011), full-time studies are one of the most important factors that lead young people to postpone taking on social roles typical of adulthood, including full-time employment, which in turn leads to their being financially dependent either on the system of scholarships offered by the university or on parents' support. As shown by Maria das Dores Guerreiro and Pedro Abrantes (2004), employment is often only a pass to other roles typical of adulthood, such as leaving the family home, starting a family, and having a child (cf. also: Nurmi, Poole, & Seginer, 1995).

In a study conducted in 2012 (Piotrowski, Kaczan, & Rękosiewicz, 2013), devoted to the significance of education, extended beyond the time that is typical for most peers, to the process of identity formation, the participants were people aged 19 to 35. They were full-time and part-time university students as well as intramural post-secondary medical school students. The most visible difference was the fact that the status of identity diffusion was found two times more often among full-time university students than in the remaining two groups, which was a sign of identity crisis still in progress despite the transition from adolescence to adulthood being over as far as age was concerned. The other two groups had considerably more mature and formed identity statuses. A characteristic shared by intramural post-secondary school students and part-time university students, despite age differences and despite the different modes of study, was the combination of education with various forms of work and a different life perspective, in which work played a significant role from the beginning of study.

It is therefore legitimate to ask about the consequences of decisions made in adolescence regarding the choice of the path of education, including the type of upper secondary school, to the processes of achieving psychosocial maturity and identity formation. Young people choosing general (comprehensive) education not only have a qualitatively different and, in the first place, longer preparation for entry into adulthood ahead of them, but also receive a different kind of support in their family homes due to the fact that their parents more often have higher or secondary education. By contrast, young people choosing schools with vocational curricula have to take into account the necessity of combining study with various forms of preparation for work and with taking

up various forms of work, as well as a shorter time before entering the labour market and starting independent life; they sometimes also have to allow for smaller support from their often less well-educated parents, with vocational or primary education.

Ravenna Helson and Sanjay Srivastava (2001) conducted very interesting research (a project called *Mills Longitudinal Study*), which revealed a very important role of identity in the course of developmental processes in adulthood. The research was longitudinal and spanned many years (1958-1997); the participants were women tested for the first time as students in the final year of college, at the age of about 21. Further studies were conducted when these women were 27, 43, 52, and 60 years old. The group of 111 women from the last study constituted 78% of the original sample. The aim of the project was to detect various positive patterns of mental health. The investigators examined the characteristics of emotional functioning and selected personality traits, the type of identity, and indicators of lifestyle as well as psychological and social maturity. The results of their analyses revealed a special mediating role of identity type (status, identified based on James Marcia's classic theory), which means that, by enhancing or inhibiting the development of identity structures, personality traits formed before adulthood influence lifestyle, satisfaction with life, the pattern of mental health, and the course of development in consecutive stages of adulthood. Identity turned out to be the main factor integrating developmental processes in adulthood. In conclusion, the authors (Helson & Srivastava, 2001) state that "identity formation and development in young adulthood is important for the later development of the positive mental health patterns" (p. 1004).

This makes the following questions immensely important:

1. How well formed is the identity, as a kind of initial psychological capital, that young people have when entering their first years of adulthood, completing not only an important stage of their life – adolescence – but also another stage of systematic education (the upper secondary stage), which is the last one for many of them?
2. Does identity type at the threshold of adulthood, being the outcome of the developmental processes of childhood and adolescence, indicate identity crisis resolution and the overcoming of the "identity confusion" involved in that crisis?
3. Which graduates of upper secondary schools remain in a state of suspension and continue to look for answers to questions important to the quality of their future life, concerning who they are and who they want to be, what is important for them in life, and what plans they have for their future?

3. Entering Adulthood: The Postponed and Delayed Adulthood Hypothesis

In Poland and in many other countries, there is a clearly visible tendency for people to postpone full entry into adulthood, understood as taking on social roles typical for adulthood (cf.: Lanz & Tagliabue, 2007; Macek, Bejček, & Vaníčková, 2007; Sirsch, Dreher, Mayr, & Willinger, 2009). It is increasingly late that young people decide to enter into a relatively stable relationship, start a family, have their first child and further children, leave their family home, start living on their own, run their own household, and take up a relatively stable job. Compared to the situation a dozen or even a few years ago, the time of growing up to “full” independent adulthood can be said to be getting longer and longer.

Remaining in a state of identity nonresolution, typical for adolescence, can lead to entry into adulthood being either postponed as a result of the suspension of identity decisions or delayed as a result of the person experiencing identity confusion (cf. research results: Brzezińska, Kaczan, Piotrowski, & Rękosiewicz, 2011). In the former case, exploratory behaviours dominate over making decisions and choices; consequently, the young person becomes stuck in the phase of increasingly prolonged moratorium. In the latter case, the exploration of alternative activities and the related values takes the form of ruminative exploration and frequently ends up in the development of a learned helplessness syndrome (cf. Jarmakowski, 2011).

What can be regarded as the main cause of taking on the roles of the adult world, including civic roles, later than in the past is the increasingly long period of education and the necessity of devoting a few years for the development of a professional career affording relative stability. This period is now usually referred to as *emerging adulthood*.

The originator of this term, Jeffrey J. Arnett (2000), believes emerging adulthood – the period between the age of 18 and 30 – to be a new phase of development between late adolescence and early adulthood. The criterion to distinguish these three stages of life is the fact of taking on social roles “typical” of adulthood. This is very rare in adolescence and fairly common in early adulthood, while the transitional stage of emerging adulthood is marked by high individual diversity and high lability (taking on, testing, and abandoning roles) in this respect. Leaving behind the dependence-based relationships with parents and significant others, built since early childhood, but still not making relatively stable long-term commitments involved in taking on adult social roles, people in this transitional phase of life devote their time mainly to exploring the possible directions of life activity, engage in intensive exploration,

and sometimes intensively experiment, mainly in the areas of social relations (intimate relationships), work, and ideology. It is not until about the age of 30 that relatively stable decisions and commitments are made concerning partner relations (e.g., starting to live together, remaining in a stable relationship, formalising the relationship through marriage, becoming a mother), professional life (e.g., the decision to go into a particular line of business, the choice of a company), and financial issues (taking out a bank loan).

What is interesting, studies (Danielsen, Lorem, & Kröger, 2000; Luyckx, Schwartz, Goossens, & Pollock, 2008) showed that strong exploration, so characteristic for emerging adulthood, was considerably lower in working people than in those who were still learning (students). At the same time, it was found that working people had a stronger sense of adulthood and were more confident about the direction they wanted to pursue in their life. Thus, working individuals not only met an objective criterion for adulthood: their sense of adulthood and their phase of identity development also attested to their greater psychological maturity.

It seems that, with the image of oneself as an “adult person” not particularly developed yet, and with a still weak sense of “being an adult,” emerging adulthood constitutes an extension of adolescence. Only the completion of the “chain” of institutional education (nursery school – primary school – lower secondary school – upper secondary school), starting in childhood and connected with being subject to compulsory schooling, brings about significant changes in this area. The prolonged period of remaining in the phase of not making long-term commitments, resulting in the postponement of entry into adulthood, may stem from many factors, most of which are environmental in nature and concern the patterns and style of life of the immediate environment as well as the broader cultural context typical in the times of what Zygmunt Bauman (2000) referred to as liquid reality.

A qualitatively different phenomenon is delayed entry into adulthood – caused, above all, by individual and environmental risk factors. These factors include, for instance, lack of support from the closest environment (not only financial, but also emotional and cognitive support), physical or health limitations, and individual resources stemming from the quality and timeliness of previous emotional, cognitive, social, and moral development and from the outcome of this development in the form of a diverse set of competencies. The results of studies (e.g., Sroufe, Egeland, Carlson, & Collins, 2005) clearly show a particularly significant influence of the effects of early socioemotional development on the child’s and, later, teenager’s subsequent functioning, mainly on the ability to take up challenges and overcome difficulties as well as on the willingness and ability to independently shape his or her own path of life.

The lack of prospects for development and the lack or scarcity of economic and resources, troubling some local communities, often determine delayed entry into adulthood or even prevent individuals from taking on roles typical for adulthood. In Poland, this refers mainly to “poor” communities and localities in towns and to some rural communities, where access to good quality health and psychological care, the level of education, and access to technological achievements often considerably limit young people’s development opportunities (Szafraniec, 2011). The impediments – either objective or stemming from the lack of understanding on the part of the community and from support inadequate to the individual’s needs in taking up developmental tasks characteristic for transition to adulthood – further increase the sense of otherness and result in building personal identity based on knowledge about one’s limitations and deficits rather than strong points and already possessed competencies.

Delayed entry into adulthood becomes an indirect result of these limitations, which could be avoided by investing in the level of education (including early education) and – perhaps above all – in identifying and satisfying basic, universal human needs (Brzezińska, Czub, Nowotnik, & Rękosiewicz, 2012) in each stage of life preceding adulthood. In the case of delayed adulthood we can therefore speak of distorted or even inhibited entry into adulthood, stemming not so much from personal choice or decision and not so much from objective external conditions as from inability – due to the lack of certain cognitive and socioemotional competencies – to cope with the barriers in the environment or with the lack of support from the community.

4. On-Time Accomplishment of Developmental Tasks and Entry into Adulthood

The assumption regarding the existence of a certain order, biologically (so-called biological clock; cf. Bee, 2004) and socially (social clock) organised, that determines the type, sequence, and timing of developmental tasks emerging and being taken on is referred to as “the normativeness of developmental task accomplishment.” Normativeness is usually defined by an indication of the age bracket in which most people take on and accomplish a given task. The adoption of the frequency criterion makes it necessary to refer to other people at a similar age and compare whether and when a given individual accomplishes a particular task with whether and when his or her peers – or most of them – do that.

Thus, performing a developmental task in accordance with the normative order makes it possible for an external observer as well as for the person

himself or herself to assert that a given task is being accomplished on time. By contrast, divergence from the framework defined by the socially and biologically determined developmental timetable (cf. Settersten, 2003) and the accomplishment of tasks outside the normatively specified time is judged as a case of being “off-time”; this manifests itself in the form of the social evaluation of task accomplishment as premature or belated, or in the form of a sense of its prematurity or belatedness. Both situations can lead to a sense of “being different” and trigger mechanisms of marginalisation or self-marginalisation.

The experience of pressure, both biological and social, directs a person’s activity towards goals whose pursuit and accomplishment give him or her a sense of being on time – that is, a sense of compliance with the explicitly voiced expectations of the environment and with internally perceived pressure. This feeling develops as individuals compare their life with that of their peers and with the culturally transmitted concept of biography (Habermas, 2007) or with the culturally conditioned “life script” (Berntsen & Rubin, 2004).

We can speak of two approaches to the timeliness of life events and related tasks. In the first approach, researchers focus on the objective moment when a given event occurs in order to compare it to the previously established norm (usually statistical) for a given group (Kokko, Pulkkinen, & Mesiäinen, 2009) and then to look for the effects of its on-time or off-time occurrence on the individual’s functioning in other areas (Bell & Lee, 2006). And so, for instance, as shown by research conducted in Finland (Kokko *et al.*, 2009, p. 358), giving birth to the first child before the age of 25 was associated with a lower level of education, lower social status, unstable course of career, and problems with alcohol.

In the second approach, the researcher focuses on a person’s feeling and beliefs regarding whether tasks biologically and culturally assigned to a given period of life have already appeared in his or her life and whether they appeared on time, prematurely, or too late compared to his or her peers.

It was this kind of subjective approach that Inge Seiffge-Krenke (2010) applied in her study. She asked young Germans to evaluate the timing of three events fairly typical of young adults, namely: leaving the family home, starting full-time employment, and living together with a partner. The respondents evaluated whether a particular event occurred too early, on time, or too late. Based on the answers, the author distinguished one group of “on-time” individuals and two groups of “off-time” ones – “early” and “late.” She found significant differences between these groups in the scope and number of developmental tasks. Compared to the group of “late” home leavers (composed of people who still lived with their parents and ones who believed that they had left their parents’ home too late or returned to their family home after leaving it previously), subjects who believed they had left home “on time” had a larger

and more diverse store of experience and entered into more relationships that could be described as intimate romantic relationships. No differences were observed between subjects from the “on-time” group and those from both “off-time” subgroups in terms of the course of education and career.

Research conducted by Radosław Kaczan (2011; cf. Brzezińska & Kaczan, 2010) on participants ranging in age from early to late adulthood, including some in the stage of emerging adulthood, aged 20-29, both nondisabled and experiencing various disabilities, made it possible to identify several subgroups differing in terms of perceived quality of life. Individuals with the highest sense of satisfaction with life were characterised by a strong sense of on-time occurrence of the life events they regarded as important, recognised more positive turning points in their life, and more often had a proactive temporal orientation. What is important, this subgroup consisted mainly of young people, functionally nondisabled, with a higher level of education and an active working life. Their peers experiencing disabilities had a different profile of results. They were more often convinced of the off-time (premature or delayed) accomplishment of developmental tasks and more often had a reactive temporal orientation; they also more often evaluated the turning points in their life negatively in terms of influence on their life. Interestingly, in this group, this was the case particularly with young people, who were less well-educated and less active in the labour market than their peers from the first group. A comparison of the profiles of results in the two groups of young adults in this study suggests a considerable role of the level of education and active working life in these people’s perception of and satisfaction with their own life. Such associations were not found in people in middle and late adulthood.

It can therefore be concluded that the level of education and taking up work or the very possibility of taking up work are of special significance precisely on the threshold of adulthood, when a particular identity is in the process of formation. Identity integrates all previous childhood experiences and ones connected with the processes of growing up; it becomes the basis for making decisions connected with constructing the framework of one’s adult life path. Because taking up work involves leaving one’s family home (actually or at least symbolically), perhaps it is treated as a kind of test of independence and perceived by the individual as a test of “already” being an adult.

5. Concluding Remarks

It remains an open question which of the paths – postponed entry into adulthood in the case of longer education (particularly general education) vs. quick

preparation for entry into adulthood in the case of the vocational education path – is more adaptive from the perspective of public interest in these unstable and therefore unpredictable times. What is of interest to the psychologist is, above all, the consequences of these choices to the process of identity formation and to the development of its mature forms. Which is more adaptive in the long run (from the perspective of the quality of functioning in adult life): shorter or longer moratorium? More or less time for unrestricted exploration of alternative courses of action, for learning by trial and error, and even for engaging in numerous risky behaviours? More or fewer situations that require making decisions and choices? Emphasis on the present and on seizing opportunities – or laboriously learning to plan ahead, to construct action plans, and to implement and evaluate them consistently?

Finally, there is the question of how students from upper secondary schools that differ in terms of the model of combining study with work cope with identity crisis and what kind of identity status they have at the threshold of adulthood: mature and already formed or immature and still in the process of formation?

Chapter 2

PERSONAL IDENTITY AND ITS FORMATION



1. Introduction

The concept of identity is related to and sometimes equated with concepts such as personality, individuality, uniqueness, sameness, or separateness. It is combined with additional descriptive terms, such as national, religious, gender, individual, group, personal, social, civic, or professional identity (affiliation). According to Erik H. Erikson (1968), identity formation is a complex, multi-stage, and at the same time multilevel process, evading simple description::

In psychological terms, identity formation employs a process of simultaneous reflection and observation, a process taking place on all levels of mental functioning, by which the individual judges himself in the light of what he perceives to be the way in which others judge him in comparison to themselves and to a typology significant to them; while he judges their way of judging him in the light of how he perceives himself in comparison to them and to types that have become relevant to him (pp. 22-23).

As we can see, the concept of identity is a construct comprising characteristics of external, social origin – beliefs about how others perceive us – as well as characteristics of internal origin, resulting from self-beliefs and the self-awareness increasing from childhood and from willingness to engage in self-reflection.

The most frequently found definitions of identity emphasise that possessing it is connected with the existence of a relatively stable set of elements in the individual's memory that the individual regards as defining him or her in a manner relatively independent of the situations experienced, which enables him or her to obtain answers to identity questions, such as: Who am I? Who do

I want to be? What do I strive for, what are my values and the goals connected with them?; What is my life about?

Thus, identity is connected with individuals having some self-definition and being aware of the existence of a complex set of personal attributes by means of which they are able to identify themselves and distinguish themselves from other people. Understood in this way, it is a cognitive construct characterised by a clear hierarchy of concepts and cognitive schemas with various degrees of generality, concerning oneself in relation to other people and putting the self into a temporal perspective.

2. The Concept of Identity

The analysis of the literature allows for distinguishing four concepts that make it possible to describe a person's identity from his or her own perspective. These are: the sense of separateness, the sense of sameness, the sense of continuity, and the sense of integrity. It is in this particular order that they appear in every person's individual development, starting from early childhood.

The sense of separateness is a sense that there is a clear border between myself and the other person, a sense that we are not only physically distinct but, above all, that our attributes make up a specific configuration for each of us, and a sense that we can identify the characteristics clearly distinguishing us from other people – even from those who are very similar in terms of appearance, personality, or behaviour style.

The sense of sameness manifests itself in the belief that this is also I, regardless of what role I am performing and how I am behaving in a particular situation. During our entire lifetime we perform different roles: some roles disappear and others begin, and the ways of performing them change depending on the circumstances. Moreover, various situations and events activate various social roles assigned to us by others. The sense that I am myself, I behave in my own way, I am faithful to my values and ideals – all this contributes to the sense of sameness regardless of external circumstances: regardless of the social and situational context.

The sense of continuity consists in considering one's life in a temporal perspective – in a historical perspective – in such a way that one recognises oneself as a changing whole and is able not only to see the similarities and differences in one's way of acting but also to identify that which is characteristic only for him or her, that which used to distinguish him or her from other people in the past, that which distinguishes him or her from others now, and that which will probably distinguish him or her from others in the future. The individual will

easily find a photo of himself or herself among other photos, integrate memories from the earliest periods of life, and use his or her previously acquired skills when the situation demands this.

Finally, the sense of integrity manifests itself in the belief that, even though they are sometimes very different from one another because they are adjusted to various circumstances, the ways of performing different roles and carrying out different tasks nevertheless do make up a whole, do resemble one another, and do go together: it is visible in them that this is always I. Their common features are recognised not only the individual but also the environment as originating in the same person. With a strong sense of integrity, the individual may have an impression that he or she gives a kind of personal mark to what he/she does – that he/she is always himself/herself, doing everything in his/her own way regardless of the type of task, the characteristics of the situation, or external circumstances. By contrast, a weak sense of integrity is associated with a belief that one's activity largely depends on external circumstances, being caused and determined by them.

The senses of separateness, continuity, sameness, and integrity have not only an individual biopsychological dimension (*Soma* and *Psyche*), but also a social one (*Polis*), since they include relationships with other people, giving the individual a sense of being part of a larger whole, of originating from somewhere and from somebody, a sense of rootedness and of being a vehicle of some tradition, knowledge, and experience passed on by the previous generations. This sense of placement in some social structure that has a history, continues to evolve, and has a future is the basis of a sense of social security, built upon a sense of belonging to (affiliation with, being part of) someone and something.

What is of interest to psychology is, above all, not identity viewed from the perspective of an external observer but personal identity as accessible to the person from his or her own internal perspective – in other words, the sense of identity. This sense has a dual nature: on the one hand, it concerns individual identity – also referred to as the self (in Polish *Ja*; Jarymowicz, 2000, p. 117). It is connected with a sense of otherness and separateness from people and a sense of uniqueness among them, which means it develops on the basis of perceiving and experiencing differences between oneself and other people in various circumstances. This manifests itself in perceiving oneself as a unique individual and in identifying with personal goals and standards. The contents of personal identity is beliefs, interests, needs, motives, values, the way of thinking, and the criteria of evaluation. Finding the answer to the main identity question – Who am I? – determines the person's stability and the consistency of his or her behaviours from situation to situation. It enables the individual to maintain a sense of self-worth and to obtain acceptance from the social environment.

On the other hand, as a social creature, living in a community whose values he or she identifies with, the human being develops a sense of community identity – the We identity (Jarymowicz, 2000), formed on the basis of directly experienced and perceived similarities to other people, resulting in a sense of community and in sharing at least certain meanings with other people. Both types of the sense of identity – personal and social (community) – translate into different identity questions that individuals ask themselves (Melchior, 2004; see Table 1).

Table 1. Types of Identity Questions

Self-beliefs	Personal identity	Social identity
Formed based on personal reflection (internal source)	<i>Who am I and what am I like in my own opinion?</i> Self-description	<i>Who / What am I part of?</i> Social self-identifications
Formed based on other people's opinions (external source)	<i>Who am I and what am I like according to others?</i> Description	<i>Who / What am I considered to be part of?</i> Affinity attribution

Based on Melchior (2004, p. 393)

3. From Attachment to Identity Formation

The sense of personal identity is connected with the process of individuation, whose essence is the enhancement of the sense of separateness, gaining independence from others in the decisions one makes, and building a sense of agency by acquiring increasingly complex instruments of satisfying one's needs. The sense of social identity stems from social contacts and interactions, which a person enters into from the very beginning of his or her life with people from the near and more distant environment and whose aim is to seek or actively build one's social niche among other people. Some scholars speak not only about social (or community) identity but also about cultural identity.

Analysing the roots of human identity in childhood, Carol E. Franz and Kathleen M. White (1985) point out that two elements intertwine in the history of every person's life. The first one is individuation, and the other one is relationships with other people, referred to as attachment. In each stage of life, personal experiences and observations of the environment enhance either individual identity or social identity. Thus, on the one hand, we accumulate knowledge and skills enabling us to act independently and more and more efficiently in tasks whose aim is to effect a change in the physical environment in accordance with personal plans. On the other hand, the accumulated

knowledge and skills contribute to changes in social functioning. For instance, mastering written and spoken language may be treated as mastering a tool of independent information acquisition (listening, inquiring, reading), recording that information (writing), and passing it on to others (talking to someone, making notes) – and in this case we speak of individuation. But it is also possible to look at language (both written and spoken) as a tool of establishing relationships, building closeness, and maintaining social contacts – in which case we speak of attachment.

From this perspective, the period of infancy – the first year of life – is marked by a dominance of attachment, and it is the time in which the roots of social identity (We identity) begin. It is then that the child establishes close emotional relations, first with the mother (the main caregiver), and then with other closest people; this gives him or her a sense of security, which in turn gives the courage necessary to move away from parents and explore the nearest environment. The second and third years of life is the time of building the foundations for personal autonomy (Erikson, 1950), discovering one's own physical and mental distinctness from other people, and a rapid increase in independence and resourcefulness in activities especially connected with self-service – in other words, this is a time marked by a dominance of individuation and the building of foundations for individual identity (I identity). In the subsequent stages of life, either one or the other element dominates; this enriches the competencies necessary to cope with life's challenges independently (individuation) or to build more and more complex relationships with other people (attachment) (Figure 1).

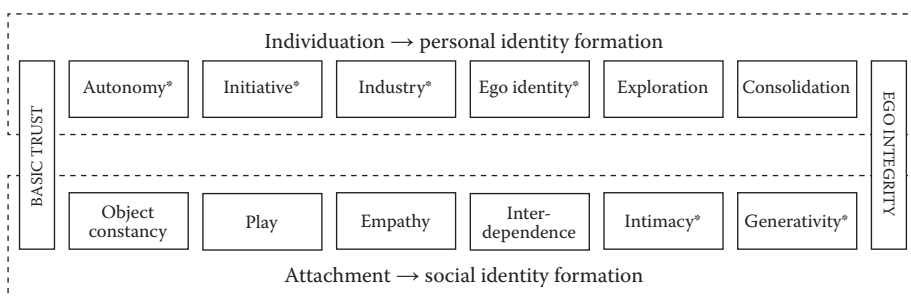


Figure 1. The path of attachment and individuation in development and identity formation according to Carol E. Franz and Kathleen M. White (1985), where asterisk (*) indicates themes present in Erikson's theory

It is visible only after the period of adolescence how important it is for the quality of human functioning to harmonise the two elements in each stage of

childhood. Alienation results from an excess of individuation not balanced by a sense of affiliation connected with diverse and extensive social contacts:

- according to their content: with family – with friends; with adults – with peers
- according to form: dyads – triads – groups of various sizes
- according to the nature of relations: private – official, public
- according to time: short-term – long-term
- according to the nature of contact: task-focused – play-focused.

By contrast, an “excess” of attachment not balanced by various kinds of activity without external interference, inspiration, or help from the object of attachment – that is, not balanced by spontaneous and independent activity – involves a risk of losing the power of making one’s own decisions or of having this power considerably reduced and becoming dependent on other people’s presence and support not only in childhood but also later, in adolescence and adulthood.

During the entire life, starting from early childhood, through adolescence, until late adulthood, the individual gains knowledge and various skills – broadens his or her resources, modifies the strategies of coping in different situations, learns from his/her mistakes, and draws conclusions from the situations in which he/she has succeeded or failed. Most importantly, however, in each stage of life, from very early childhood, there develops an increasing awareness of being a distinct individual and a sense of identity.

There are several sources of information about oneself, which become the basis for the formation of a sense of identity. These are:

- observation of one’s own behaviour and its consequences in various situations, comparing them, and drawing conclusions for the future (the “lessons” learnt from both successes and failures);
- observation of other people’s behaviours and comparing oneself with others; importantly, these comparisons are often made from the point of view of the time-on or time-off occurrence of these behaviours;
- obtaining information about oneself directly from other people;
- social categorisations connected with the awareness of belonging to particular social groups (categories), distinguished based on age, gender, sexual orientation, ethnic, religious, political, and economic affiliation, and even place of residence or family size and structure;
- insight into one’s own personality as well as cognitive and emotional readiness for self-reflection.

Already in early childhood, certain beliefs appear and strengthen: first – the belief that, despite similarities to other people in terms of age and gender, appearance and character traits, or the style of functioning, one does differ from

them (sense of separateness); second – the belief that, in all circumstances (excluding exceptions, such as some critical or traumatic situations), one recognises oneself as “the same” and is recognised by other people as “the same” (sense of sameness); third – the belief that one is always oneself, regardless of the changes one undergoes (sense of continuity); fourth – there is the sense of integrity, developing towards the end of childhood and subjected to many trials in adolescence.

In the successive phases of childhood, the individual gathers self-knowledge in a natural and spontaneous way, strongly dependent on external circumstances – unwittingly, as it were (cf. Vygotski, 1971a, 1971b). This knowledge usually appears as a side effect of the child’s activity in the physical environment, as a result of various activities involving physical objects, though it should be remembered that an important object of cognition is also the child’s body and the adult’s body. The younger the child is, the more often an adult is an intermediary between the child and objects; it is therefore the adult who plays the key role in whether the child gains self-knowledge and in what knowledge he or she gains by moving in space and manipulating objects. From infancy, this process is accompanied by the acquisition of a sense of separateness – physical and psychological – from other people; on that basis, the senses of sameness and continuity arise and develop, constituting the essence of the sense of identity.

The factors supporting this process, as well as risk factors characteristic of this early stage when the foundations of identity are formed, are connected mainly with the actions of the child’s significant others. What becomes particularly important is their willingness and ability to recognise the child’s needs and, accordingly, to create and modify offers of activity: first in the nearest and then in more distant physical and social environment. If this process takes place successfully in an environment that is optimally diverse according to the child’s needs and competencies, its final outcome is the integration of various experiences connected with the self with the system of values that develops from the early years of life and defines the attitude towards oneself and the world as well as the directions of activity.

The beginnings of identity should be sought in early childhood. Based on the accumulated information about the self and the world, increasingly complex cognitive structures arise in the child’s mind, allowing, on the one hand, for more efficient processing of further incoming information, and on the other – for more and more effective use of the experienced already gained.

As studies have shown (Kytta, 2002, 2004; Miquelote, Santos, Caola, de Montebelo, & Gabbard, 2012), the quality of physical space and changes in its organisation may instantly be an impulse for the child’s cognitive development – or block it – by evoking and stimulating curiosity and by encouraging

the exploration of the environment along with the objects present in it. The quality of the social environment, including the important quality of the child's relations with parents/caregivers and changes in these relations, occurring (or not) in the course of development, especially in the early stages of childhood, when development is a highly dynamic process, may cause significant changes in the child's personality structure and identity, which it is possible to register only in a long-term perspective.

In her analysis of the results of a study on the quality of young children's physical and social environment (Hornowska, Brzezińska, Appelt, & Kaliszewska-Czeremska, 2014¹), Karolina Appelt (2015a, 2015b) sought an answer to the question of the quality of parent-child relations. The participants in the study were 972 children aged between 1 and 41 months (53% girls). It turned out that, of the six factors investigated (responsiveness, acceptance of the child's undesirable behaviours, organisation of the child's diurnal rhythm and concern for the safety of the physical environment, diversity and quality of developmental materials, parental commitment to the child's education, concern for the diversity of the child's experience), defining the framework of interaction between the child and the parents, the diversity of results was the highest in the case of responsiveness and the lowest in the case of day organisation. The tested families differed the most in terms of the way in which parents reacted to the child's behaviour with verbal, tactile, and emotional encouragement in order to effect the desired behaviour, and in the way they communicated with the child. Even though the social environment of older children's development was richer in developmental opportunities and more diverse, it was observed, as Appelt (2014) writes, that

the child's increasing manifestations of his or her own will and striving for autonomy cause an increase in limitations and regulations imposed by the environment, which becomes less permissive ... and less adjusting to the child, beginning to require more adjustment to the environment and its rules on the child's part.

Adults are crucial to the formation of the child's first cognitive schemas – what is particularly important is the type of relationship they have with the child and the quality of their early interactions with the child. Classic theories of attachment (Ainsworth, 1969; Bowlby, 1971; Ainsworth & Bowlby, 1991)

¹ The study was conducted as part of the project titled *Adaptation Of Instruments For Assessing The Quality Of The Physical And Social Environment Of Children Between 6 And 36 Months Of Age*, financed by the Polish Ministry of Science and Higher Education (no. 0588/B/H03/2009/37), carried out at the Institute of Psychology of the Adam Mickiewicz University in Poznań in 2009–2014 (principal investigator: Prof. Elżbieta Hornowska, PhD hab.).

and their various elaborations, as well as studies on early childhood attachment relationship and its consequences for development in childhood and later (e.g., Waters *et al.*, 2000; see: Grossmann, Grossmann, & Waters [Eds.], 2005; Cassidy & Shaver [Eds.], 2008) show that the type of relationship between the child and the caregiver in the first year of life results in the emergence of cognitive schemas (internal working models) different in terms of structure, content, and readiness for change, depending on whether the relationship was secure or insecure. These schemas considerably influence the child's behaviour in new situations and the attitude to unfamiliar people, the way of adapting to new environments, willingness to learn, and – consequently – willingness to modify the current ways of acting. They also directly determine the level of the child's curiosity and willingness to engage in exploratory activities.

As was shown by the longitudinal research conducted as part of the project titled Regensburg Longitudinal Study (Grossmann, Grossmann, Kindler, & Zimmermann, 2008), a secure mother–child relationship and, additionally, father's supportive behaviour had not only direct consequences in early childhood in the form of “secure exploration” in the parents' presence. The important features of this type of exploration are manipulating objects and performing tasks, especially in situations when the child experiences frustration and yet behaves in a focused, committed, and persistent way and remains self-confident as well as full of ideas. In the further stages of childhood, such children were characterised by greater cognitive courage and readiness to take up cognitive challenges in situations when parents were absent. Moreover, in boys as well as in girls, the number of gendered behaviours visible in interactions with other children was significantly lower than in children with insecure attachment. Longitudinal analyses also revealed good adaptation in children with a secure attachment style in educational institutions from nursery school to college.

Other analyses performed as part of the same project, Regensburg Longitudinal Study (Becker-Stoll, Fremmer-Bombik, Wartnec, Zimmermann, & Grossmann, 2008), concerned the association of early childhood attachment relationship with the quality of that relationship at the age of 6 and 16 as well as its links with autonomy and the quality of social relations assessed in terms of two dimensions – hostility and agreeableness – at the age of 16. A lack of continuity was observed between the quality of attachment relationship in infancy, in the school age (6 years), and in adolescence (16 years). Researchers explained this lack of continuity in the organisation of the attachment relationship with various risk factors in the tested children's life (parents' divorce or death, parting with a friend, illnesses and accidents in the family, violence, problems at school, parents' pressure for high achievement). Regardless of the discontinuity of the attachment relationship, the study confirmed a positive

association of its quality in infancy, in the school age, and in adolescence with the level of autonomy and the quality of the teenager's social relations.

The child enters adolescence with cognitive schemas formed in all the previous stages of life, including the earliest ones, which his or her memory does not cover (early childhood amnesia). Some of these schemas may be negative stereotypes, or even prejudices. As Reuven Feuerstein (Feuerstein & Feuerstein, 1994) stresses in his theory of averaged learning, it is the child's significant adults who, as early as infancy (cf. Klein, 1987), as a result of the mechanisms of "mediation of meaning" and "transcendence" (Bruner's "going beyond the information given"), leave a positive or negative emotional mark on objects in the child's environment, including people and relations with them. Additionally, they enhance the "to the world" or "from the world" attitude as a result of the "mediation of regulation and control of behaviour" mechanisms and as a result of the "mediation of feeling of competence," visible especially in situations that are cognitively new or emotionally difficult for the child.

A condition for all these mechanisms of change in the child's behaviour and in the underlying cognitive schemas to be activated is the readiness of the child's significant other to engage in intentional and at the same time reciprocal activity based on an exchange of resources with the child. Both features – intentionality and reciprocity – play control functions for each other when they occur together. Intentionality without reciprocity creates conditions for manipulating the child and forming him or her in accordance with one's own idea, while reciprocity without intentionality carries a threat of chaos in both the child's and the adult's actions.

The child enters adolescence with a particular identity capital (cf. Côté, 1996, 2002). This is his or her initial capital, determining the quality of entry into the new stage of life. During the entire stage of adolescence, particularly towards its end, the physical capabilities of the organism considerably increase, cognitive abilities grow, and there appears a temporal perspective much broader than in childhood, encompassing not only the present and the past but, above all, the future; attitude towards oneself and others changes, and qualitatively new social relations appear. Old areas of activity expand and change, but numerous new ones emerge. Social expectations also change, and new requirements appear. All this results in the competences possessed, formed in childhood, becoming insufficient to cope with the new challenges, especially as the adolescent begins to plan his or her future and, from this perspective, more and more often makes decisions regarding the areas and forms of engagement in various activities.

What is the most characteristic for adolescence is the multitude of new offers, opportunities and not always fully understandable new expectations on

the part of other people. At the same time, there appear numerous and sometimes contradictory instructions, commands, and prohibitions from adults, as well as guidelines and offers of help. Finally, the teenager himself or herself is a source of many ideas and intentions – and of many as yet unstable plans, too. On the one hand, different opportunities to gain new experience give rise to questions regarding who one is, who one wants to be, and what one wants to do in life; on the other hand, they allow for seeking the answers in many different areas. The multiplicity and diversity of offers and opportunities today is more and more often accompanied by their short-term nature and by the unpredictability of when they arise and when they disappear; this gives rise to many difficult situations. When they emotionally involve young people and become personally important for them as potentially enabling self-discovery, their excess combined with young people's lack of experience in planning their actions becomes the cause of serious "identity confusion."

The areas of activity in childhood usually concern the physical environment and the closest social environment, while in adolescence a new area appears, which significantly changes the previously accumulated self-knowledge and the sense of identity. The young person must make decisions concerning his or her future activity – namely, further education and/or work, and new intimate social relations connected with the next stage of life: adulthood. This is an area strongly connected with the system of values, with building a vision one's own future, and with defining one's life priorities as well as the priorities in current activity.

Analysing the sense of identity in terms of four partial senses – separate-ness, sameness, continuity, and integrity – and relating them to various domains of human functioning, including identity domains, one must ask questions not only about the sequence of their emergence in the process of development, but also about the cognitive, emotional, and motivational processes involved in their formation and subsequent modification. These questions, then, are not about what the sense of identity is composed of, how it functions, and what contents it is filled with, depending or not depending on the domain; they are about the sequence of changes and the regulatory role of cognitive, emotional, and motivational processes in going through successive phases of identity formation.

Already James Marcia (1989) believed that secure attachment was conducive to the development of the identity achievement status, since adolescents with this type of attachment, constituting a kind of "secure base," do not feel threatened during the exploration of their environment. Based on the characteristics of the four types of identity "states" (statuses) distinguished by Marcia, different attachment styles can be expected in relations with significant others.

Erikson's (1968) model of psychosocial ego development leads to the conclusion that the positive resolution of identity crisis in adolescence promotes the resolution of the next developmental crisis – in early adulthood – towards intimacy. Some scholars (e.g., Franz & White, 1985) believe that Erikson's descriptions of identity formation and intimacy development reflect the normative path of men's development, but not of women's. However, according to the authors of the meta-analysis (Årseth, Kröger, Martinussen, & Marcia, 2009), the results of research into the significance of gender in the transition from identity to intimacy are neither clear nor conclusive.

The distant consequences of attachment style to the quality of the resolution of the “identity diffusion vs. individual identity” crisis in adolescence and the “intimacy vs. isolation” crisis in early adulthood were analysed by Annie K. Årseth, Jane Kröger, Monica Martinussen, and James E. Marcia (2009) in their comparative study. Their meta-analysis² concerned the association of the quality of attachment with the type of identity status and with intimacy in early adulthood. In the former case, the analysis covered aggregate data from 14 studies (2,329 subjects, 56% women; mean age: 20 years; only 96 subjects were working people, the others were students), and in the latter case – from 21 studies (1,982 subjects, 58% women; mean age: 28; working people and students).

The results of the first analysis revealed very weak, though significant, correlations between attachment styles and identity statuses (secure style and achievement status: $r = .21$, $R^2 = 4\%$; insecure style and diffusion status: $r = -.23$, $R^2 = 5\%$). Although, as predicted, the percentage of people with a secure style among individuals with the identity achievement status (55%) was higher than among individuals with the statuses of moratorium (37%), foreclosure (28%), and diffusion (23%), the only significant difference was the one between the statuses of diffusion and achievement. At the same time – in the second analysis – a stronger association with the level of intimacy was observed in the case of attachment style than in the case of identity status. About two-thirds of both men and women with the statuses of identity achievement and moratorium scored high on measures of preintimacy and intimacy. Significant gender differences were found in people with diffusion and foreclosure statuses. About 75% of men with these statuses scored low on intimacy (pseudointimate and stereotyped levels). The female group was considerably more internally diverse. The pseudointimate and stereotyped levels were represented almost equally often as the preintimate and intimate levels. According to the authors, these results show that

² The materials for analysis (articles and doctoral dissertations) were selected according to the same criteria as in the study by Martinussen and Kröger (2013).

identity and intimacy follow an epigenetic line of development for most men in the samples, but that identity and intimacy are more likely to codevelop among at least one half of the low identity status women sampled [the low statuses are identity diffusion and foreclosure – AB] (Årseth, Kröger, Martinussen, & Marcia, 2009, p. 27).

4. The Process of Identity Formation

4.1. Introduction

On the one hand, most perspectives on identity formation are based on the psychosocial ego development theory according to Erik H. Erikson (1950), an American psychoanalyst of German descent – which is fundamental in this area of psychology – and on the conception proposed by a continuator of his thought, Canadian developmental and clinical psychologist James E. Marcia (1966³). On the other hand, these perspectives also draw on the critique of those classic approaches and on new discoveries (Schwartz, 2001; Côté & Schwartz, 2002; Meeus, 2011; Côté, 2014; Carlsson, Wängqvist, & Frisé, 2015).

Although it begins in childhood and continues throughout adulthood, the process of identity formation culminates in adolescence, and the quality of identity attained in that stage largely determines the quality of the person's entry into the roles of an adult. In adolescence, the main task is to integrate previous experiences concerning the self and relations with the environment and to define these relations for the nearest future. All this determines the form of identity that the young person has when entering the next stage of his or her life: adulthood. According to Erikson (1964; cf. 1987), identity can take three forms: a rigidly organised totality, a flexible and freely developing wholeness, and an amorphous, diffuse form without clearly defined borders – diffusion.

Erikson (1964) uses the terms wholeness and totality to distinguish between two kinds (types) of ego integration. The former denotes the kind of combination of parts, even entirely different parts, that produces a fertile relationship and beneficial organisation, while the latter resembles a figure in which the borders are underlined. Importantly, the integration described as totality maintains coherence thanks to the principle of including everything that is “natural” or “logically” belongs to one category and absolutely excluding

³ James E. Marcia's 1964 doctoral dissertation was titled *Determination and Construct Validity of Ego Identity Status* (Ohio State University: unpublished doctoral dissertation). On its basis, Marcia wrote and published his now classic article: “Development and Validation of Ego Identity Status.” *Journal of Personality and Social Psychology*, 1966, 5, 551-558.

everything that is alien from its scope. The wholeness type of integration, by contrast, is based on the principle of “peaceful coexistence.”

Thus, the way of resolving identity crisis in adolescence and the development of a particular form of identity at the threshold of adulthood (on the continuum between identity diffusion and mature formed identity – i.e., identity achievement or the less mature status of identity foreclosure) is rooted in the early stages of childhood. On the other hand, the effect of this process, so dynamic in the period of transition from childhood to adulthood, largely determines the attitude towards oneself and towards other people, as well as the attitude towards everything that is new – “different” than what has been known so far. To a large extent, it determines the courage to introduce changes, which always disturb the status quo and involve a risk, sometimes difficult to estimate. It also determines readiness for change (cf. Anthis & LaVoie, 2006) in the subsequent stage of life (in early adulthood), including readiness to take up new challenges, new developmental tasks, and the new social roles connected with them.

4.2. Types of identity statuses according to James E. Marcia

James E. Marcia (1966), a continuator of Erik H. Erikson’s thought and the originator of the approach to identity development (which is even frequently referred to as a paradigm) in which the central concept is “identity status” (identity-status paradigm), is considered the precursor of research on identity and its influence on human functioning.

The identity crisis characteristic of adolescence can be defined as the experience (on the emotional and cognitive levels) of a conflict between the need to redefine oneself and one’s place in life (inspired by a lack of self-confidence) and the means of achieving this goal available to the individual – personal resources and the resources of the social environment (Figure 2).

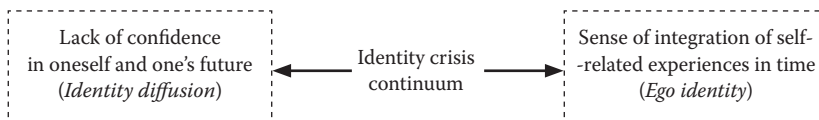


Figure 2. Identity crisis continuum according to Erik H. Erikson (1950)

The need to redefine oneself appears as a result of interaction of biological, social, and psychological factors (cf. Erikson, 1950), namely: (1) experiencing

and observing numerous, often radical and sudden, changes in one's body (the effect of puberty); (2) perceiving changes in the quality of social relations and changes in the course of interactions with different people (the effect of social expectations); (3) changes in cognitive processes, including perception (penetrating observation) and information processing (abstract thinking, the ability to plan) (the effect of reflection and self-reflection). Erikson (1950) writes:

The adolescent mind [at the beginning of adolescence – AB] is essentially a mind of the *moratorium*, a psychosocial stage between childhood and adulthood, and between the morality learned by the child and the ethics to be developed by the adult. It is an ideological mind (p. 274).

According to the initial version of the theory of identity statuses proposed by James E. Marcia (1966), the form of personal identity is the outcome of the individual's experience (or lack of experience) of identity crisis and the way of overcoming that crisis. The process of identity formation involves two kinds of activities. One of these kinds, manifesting itself in the crisis phase, is exploration, which consists in seeking out and gathering information, asking questions, challenging and testing various options, experimenting, as well as critically reflecting on values, the areas of one's previous identifications, and the roles performed. The other kind of activities, manifesting itself in the phase of overcoming the crisis (coping with the crisis), is commitment, consisting in the selection and choice of goals, in integrating them into a consistent whole, in making decisions regarding personal engagement in their implementation, in accepting and taking on the responsibilities connected with these goals, and – finally – in engaging in their achievement. This second aspect of identity formation concerns the long-term investment of personal energy (engagement) in a variety of practical and ideological fields (domains), such as religion, politics, occupation/work, sexual activity, and social relations. The integrated, consistent set of commitments and engagement constitutes the core of the individual's identity, giving it a distinct form, clear to other people as well. Identity crisis ends in the formation of identity – with identity assuming a specific form.

The presence or absence of exploration and the presence or absence of commitment/engagement give four possible combinations, which Marcia (1966) refers to as “identity statuses” (Figure 3). These are:

- identity diffusion – absent, rare, or chaotic exploration combined with a lack of decisions and commitments;
- identity moratorium – frequent and diverse exploration combined with a lack of decisions and commitments;

- identity foreclosure – absent or rare exploration, or exploration limited to selected areas – usually chosen and controlled by others; adoption of the commitments defined by other people;
- identity achievement – frequent and diverse exploration, making choices and decisions, engagement in their implementation, identification with the choices made.

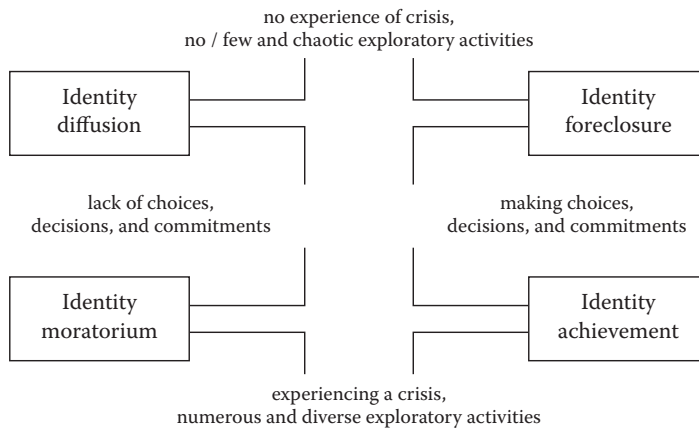


Figure 3. Four identity forms (statuses) according to James E. Marcia (1966)

According to Marcia (1966, 1980, 1993), based on the “strength/size” and character of the two types of activities (exploratory and connected with engaging in the fulfilment of commitments), it is possible to distinguish four types/kinds of identity status (Figure 3):

- identity diffusion, being the “precrisis” form of identity: people with this amorphous type of identity, with weak “self – not-self” borders, with not very diverse and weakly organised experience concerning the self, do not experience identity crisis – they do not see a conflict between their needs and other people’s expectations, do not feel doubts, and can see no need to change; they are characterised by rare or chaotic and generally reactive exploratory activities or no exploratory activities at all; they may sometimes experience a sense of confusion in various domains, characteristic of identity crisis, but – due to the lack of proper experience – they do not make choices regarding values or activities and do not make lasting commitments involving activities connected with ideology or occupation;
- identity foreclosure (or handed-down identity): people with this type of identity do not experience identity crisis (no conflict or doubts concern-

ing oneself); they are characterised by rare or no voluntary engagement in exploratory activities, but are typically ready to engage in various activities, usually the same as those that their significant others engage in – hence the term “identity foreclosure” (identity adopted from others) or “handed-down” identity (given by others); Marcia (1966) comments on these people as follows:

It is difficult to tell where his parents’ goals for him leave off and where his begin. He is becoming what others have prepared or intended him to become as a child.’ And further on: “an apt description for one who is becoming his parents’ alter ego (p. 558).

He also draws attention to a certain “rigidity of their personality,” shown by the fact that, although they feel strongly threatened in situations when the values adopted from parents or other significant adults turn out not to be functional, they do not undertake exploratory activities in order to verify and modify their earlier choices.

- identity moratorium: these people experience identity crisis (conflict and doubts) and undertake orientational and exploratory activities; although these activities provide numerous and diverse new experiences, the sense of chaos and confusion does not disappear, since the activities do not lead to a choice or to engagement in selected offers in order to test them in one’s own action; nonengagement and even avoidance of choosing and decision making may in turn intensify the sense of discomfort; thus, these individuals remain in crisis and continue to experience an increasingly intensive sense of identity confusion;
- identity achievement: these people experience identity crisis; they try to reduce the uncertainty, confusion, and doubts regarding themselves and their future that they experience as a result of social comparisons and self-reflection by engaging in numerous and diverse exploratory activities; the effect of information obtained independently through the exploration of options and offers of activity (occupation) and offers of values (religion / political ideology) is making choices and decisions regarding engagement in selected and independently “tested” areas.

In order to obtain sets of prototypical traits characteristic for each identity status, Mary E. Mallory (1989) asked Marcia himself and other scholars who tested his model to describe a person perfectly reflecting each of the types of identity. The following terms were indicated the most often by the competent judges (these descriptions were used by Helson & Srivastava, 2001):

- formed identity: the individual values his/her autonomy; nondisordered, coherent personality; behaviour consistent with ethical norms; a friendly

person, open to contacts with others; efficient; having insight into his/her own behaviour;

- identity moratorium: the individual values his/her autonomy; he/she is troubled by existential dilemmas, restless, doubting, rebellious, nonconformist; an introspective tendency; linguistic fluency;
- identity foreclosure: behaviour consistent with gender; satisfaction with oneself; conventionality, moral rigorism, conservative values; increased impulse control, repression of conflicts, frequent use of defence mechanisms;
- identity diffusion: unpredictability; avoidance of close relationships; weak system of ego defences; reluctance to act, lack of a sense of meaning in life; withdrawal from situations causing a sense of frustration.

These four identity statuses are associated with different temporal life orientations (cf. Rappaport, Enrich, & Wilson, 1985; Alipieva, 2015), with different systems of values, philosophies, and lifestyles, and with the quality of life (Rahiminezhad, Kazemi, Farahani, & Aghamohamadi, 2011). Consequently, they have different effects on the quality of entry into adulthood and on the undertaking and performance of tasks and roles typical of adulthood.

4.3. Phases of identity formation in James E. Marcia's model

Based on the reconstruction of the process of identity formation as presented in Marcia's texts, it can be stated that, if it proceeds in a manner optimal from the point of view of the goal – namely, the development of a mature form of identity (the identity achievement status; cf. Figure 4 – Path A), identity formation can be divided into three phases (cf. Brzezińska, 2000; cf. the cycle-and-phase model of development):

- the precrisis phase, in which identity has a diffuse form (corresponding to Erikson's amorphous form of diffusion / confusion);
- the crisis phase, in which identity takes a "moratorium" form;
- the postcrisis phase, which ends in the formation of identity mainly as a result of personal explorations, comparisons, and decisions (identity achievement, corresponding to Erikson's wholeness).

The first – precrisis – phase is a latent phase. The self-related experiences gathered by the individual from childhood and still gathered in the stage of early and late adolescence are "not very identity-sensitive." Biological changes connected with the processes of sexual maturation (in the domain of *Soma*), changes in social expectations (in the domain of *Polis*), and changes in the

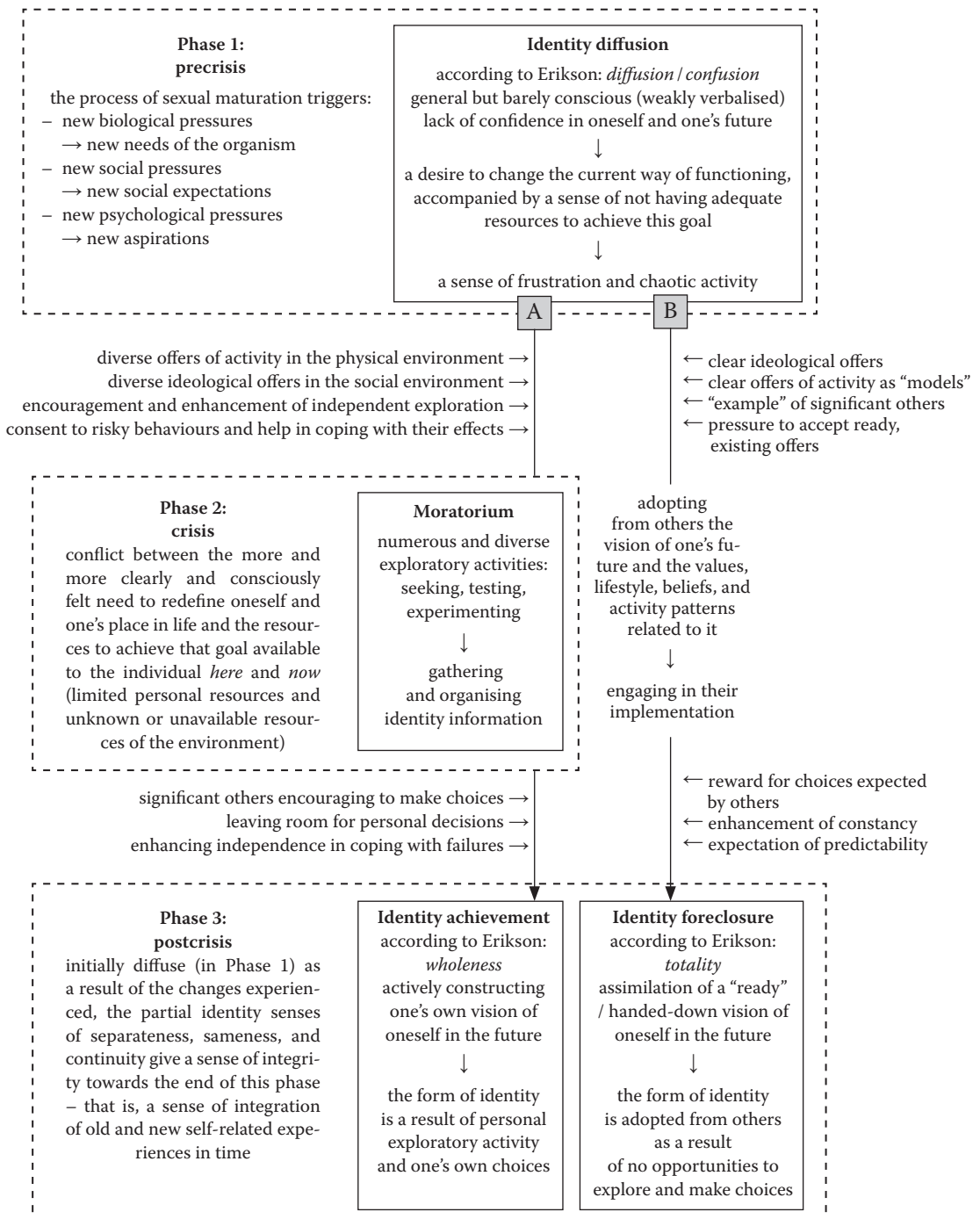


Figure 4. Phases of identity formation and identity statuses according to James E. Marcia

quality of the individual's mental functioning (in the domain of *Psyche*) are not a source of distinctly perceived pressures or conflicts; they do not yet give a sense of dissonance, incongruity, or failure to meet external requirements or live up to one's own image of oneself in the close and distant future strong enough and emotionally painful enough to trigger any actions.

The second – crisis – phase involves the experience of conflict between one's own desires, changing as a result of increasingly numerous and increasingly significant changes in the domains of *Soma*, *Polis*, and *Psyche*, and the impossibility of their fulfilment in the current form and with the use of the current personal and social resources. The experience of crisis is an experience of emotional tension, and on the cognitive level it involves a sometimes intense sense of dissonance and identity confusion. If only the individual's physical and social environment is sufficiently diverse, and if the adolescent's significant others enter into interactions with him or her and maintain contact based on mutual trust, which makes it possible for the individual to verbalise and, in doing so, to become aware of his or her problems, and if they consent to and encourage greater independence than before, there begin to appear orientational and exploratory activities, whose aim is to test the offers and opportunities of possible activity and ideological commitment.

The third – postcrisis – phase brings a decrease in emotional tension, mainly as a result of activities using the information previously gathered through independent exploration as well as received from others in a "ready" form. They serve to make decisions regarding commitment to certain areas and either choosing a particular ideology or adopting it from others. Making a decision, or making a choice, terminates the state of crisis and, for some time at least, ends the identity formation process. A change of external conditions, including critical or traumatic events or a change in the individual's competencies, may trigger exploratory activity again, leading to the acquisition of new experience and to new decisions to change the current priorities, or to a decision to maintain them despite the changed circumstances.

The formation of identity foreclosure proceeds somewhat differently (Figure 4 – Path B). According to Marcia's model, it has two phases. After the precrisis phase, when identity is amorphous (the state of diffusion/confusion), there is no identity crisis phase but, instead, there is the phase of identity foreclosure – adopting identity from significant others. It ends in the development of a "closed" form of identity (according to Erikson – totality). What is thus dropped is the identity moratorium phase, when the individual actively and, above all, independently looks for information to get rid of the sense of confusion in answering the questions of Who am I? and What am I heading for?

The main difference in the course of the path to formed identity – identity achievement or foreclosure – concerns, firstly, the sources of information that contributes to the acquisition and organisation of self-knowledge and to making decisions regarding one's future; secondly, the difference concerns the role of the individual's own activity in this process. In the former case, it is mainly personal observations of people in various situations, one's own comparisons and exploratory activities, frequently risky, and personal reflection on their outcomes, as well as self-reflection on one's own system of values and beliefs that lead to the formation of a vision of one's own future and one's place in it.

In the latter case (identity foreclosure), the main source of "identity information" is the beliefs and opinions of the individual's significant others – not only parents and teachers, but very often also "Internet-significant" people. It is their beliefs and opinions that serve as the basis for evaluating the meaning of the effects of one's own observations and actions, for constructing and verifying one's own value system, for the crystallisation of lifestyle, for justifying the choices made from among the options provided, for the preferred patterns of behaviour in various situation, and, above all, for the vision of one's own future. Thus, the contents of identity in different areas become adopted – or, more accurately, "handed down," mainly because significant others limit the range of choices to those which they indicate and accept, and because they control the individual's decisions.

Making commitments and engaging in their implementation, as a result of the choice made, is a natural consequence of the previous phase – exploration. Having previously focused on discovering and testing their own and the environment's resources and on making preliminary decisions regarding themselves, in the second phase, based on the entire knowledge gathered, the individual begins to make conscious decisions regarding engagement in areas of importance to them, crystallises their world view, and thereby obtains an answer to the question of "Who am I, what do I care for?", building their personal identity step by step. Still, commitment consists not only in making a decision regarding further activities in life but also in taking responsibility for the short-term and long-term consequences of these decisions. It also consists in personal engagement in a particular activity and in conscious investment of personal energy in a particular practical (further education, taking up a job, starting a family) or mental area (the choice of a particular ideology or worldview), leading to a sense of continuity in time and space. Thus, commitment comprises two elements. The first one is personal engagement in actions stemming from the choices made. The second one is the awareness of the consequences of the decisions made and readiness to accept them, as well as consent to these consequences.

Research shows that what substantially contributes to the process of identity formation and to the attainment of a particular identity status is the person's individual readiness to change, developing from early childhood. Kristine Anthis and Joseph LaVoie (2006) point out that there is a link between a high level of readiness to change and two identity statuses: identity moratorium and achievement. This would mean that, above all, high readiness to change triggers exploratory activities. This tendency develops long before the appearance of identity formation as a developmental task. Therefore, some form of identity (identity foreclosure, possibly identity moratorium or achievement) develops already in childhood.

4.4. Transformation of identity statuses according to Alan S. Waterman

In the light of research results, James E. Marcia's (1966) classic two-stage model proved to be insufficient to explain the process of identity formation and its outcome in the form of a particular identity status. Scholars have pointed out that personal identity develops dynamically, which means that its form, once shaped, is not lasting but transforms under the influence of the individual's new aspirations, new challenges from the environment, as well as new tasks and roles (Waterman, 1999; Bosma & Kunnen, 2001); these changes can be both progressive and regressive. In no stage of life is identity fixed or "ready": it undergoes change and is constantly reconstructed and modified under the influence of new experiences. This opens up a broad area for the study of the identity formation process during the period of entering adulthood and later, as well as for investigation into its associations with both objective and subjective indicators of adulthood.

The process of identity formation is the central and most important task faced by every teenager. The path towards mature identity is described by Alan S. Waterman (1982; cf. the analysis of identity status change paths in: Waterman, 1999), who elaborated Marcia's model. Waterman decided that Marcia's theory merely described various identity statuses but did not clearly specify the order of their emergence; he also decided that it was too static and closed. What influences not only the type of identity status but also the nature of the changes of that status is, above all, the quality of the individual's social environment, including:

- consent to exploration and experimentation;
- consent to and creation of opportunities to make choices;
- encouragement to make choices in various situations;
- expectation of readiness to take responsibility for one's own choices.

Waterman proposed his own model of identity status changes, taking into account both the progressive and the regressive nature of these changes. According to Waterman, the optimal – standard – path of identity development and modification of the already attained identity status leads, just like in Marcia's model, from (1) identity diffusion at the beginning of adolescence, through (2) identity foreclosure and/or (3) identity moratorium, to (4) identity achievement towards the end of adolescence. In this process, there may be progressive changes, such as transition from identity diffusion through foreclosure to moratorium, as well as regressive changes, such as a "fall" from identity achievement to moratorium or from identity moratorium to diffusion. The prolonged maintenance of an identity status (stagnation) may stem from a lack of exploration opportunities or from a lack of opportunities to make commitments (that is, from limited possibilities of choice), or from both at the same time.

The path from identity diffusion to identity achievement is therefore rarely straight. Depending on what happens in the adolescent's environment and on what competencies he or she currently possesses, it may involve progressive or regressive transitions (falls to a "lower" status or returns to a previous status). Figure 5 presents the model of identity status changes based on Waterman's (1982) original idea. It will make it easier to understand the dynamics of changes in the process of identity formation, described for its four forms – identity statuses.

STAGE 1. IDENTITY DIFFUSION

When the teenager enters the first phase of adolescence, he or she experiences numerous visible changes in the appearance and functioning of the body, caused by puberty. The size and proportions of body parts change; new physiological processes appear, such as period or nocturnal emissions; high emotional lability appears. If, additionally, the young person regards these changes as off-time, arriving too early or too late compared to what he or she can observe in peers, he/she will make much effort to function as previously. The person may seek various ways of coping with anxiety and fear and with difficulties in relations with others (particularly with adults). He/she may be apathetic, uninterested in the future life, focused on himself or herself and on what brings momentary satisfaction or quick benefits. The young person sometimes acts in a disorganised and chaotic way, frequently becomes distracted, and changes the forms of his or her activity in ways that are difficult for the environment to understand. This state is referred to by Marcia (1980) as identity diffusion, and research

shows that it usually appears precisely in the early phase of adolescence – at the age of 12-14.

What helps to cope with the diffusion of activities and a sense of “identity confusion” and determines the time of transition to the next stage is, above, all, the bond connecting the teenager with the environment. In a situation of not yet having an internal structure that could “unify” new experiences, the most important thing is a stable environment, which constitutes a kind of scaffolding – sets clear requirements, does not yield to the adolescent’s demands and provocations, clearly defines what is allowed and what is not, and at the same time provides support, thereby reinforcing the weakened sense of security.

However, the process of coping with diffusion by complying with external regulations significantly depends not only on the quality of the closest home and school environment. What is also of considerable importance is personal resources, particularly interpersonal skills, being a result of development in all previous stages of life. These resources not only make it possible to maintain relations with parents and other adults, but also – more importantly in this turbulent period of life – constitute the basis for maintaining one’s position in the group and for establishing the first (preintimate) relationships with the opposite sex.

Strong support and control from close others, orientation towards others, as well as orientation towards learning the external rules and complying with them in order to recover the upset sense of security on the one hand, and on the other – seeking one’s place among others result in the temporary “adoption” of a “ready” form of identity from others, which decreases the sense of being lost, the sense of confusion, and emotional discomfort. In relation to the original state, this will be a progressive change (cf. Figure 5 – transition from the status of diffusion to the status of identity foreclosure).

However, teenagers may remain (stagnation) in a state of diffusion and the discomfort it is accompanied by (cf. Figure 5 – dotted arrow towards identity diffusion). This happens when the environment is rather unstable and therefore unpredictable, which disturbs the sense of security, and when the teenager does not receive support adequate to his or her frequently changing needs, particularly from adult caregivers. Such a state results in a deterioration of mood, in the appearance of a sense of absurdity, dissatisfaction, and suffering, as well as in a sense of loneliness and not being understood or even being abandoned by others.

A possible stage in identity development is the omission of the phase of identity foreclosure (mirror identity) in favour of actively testing the offers and opportunities available in the nearest environment and immediately moving from the state of identify diffusion to moratorium. What favours this kind of

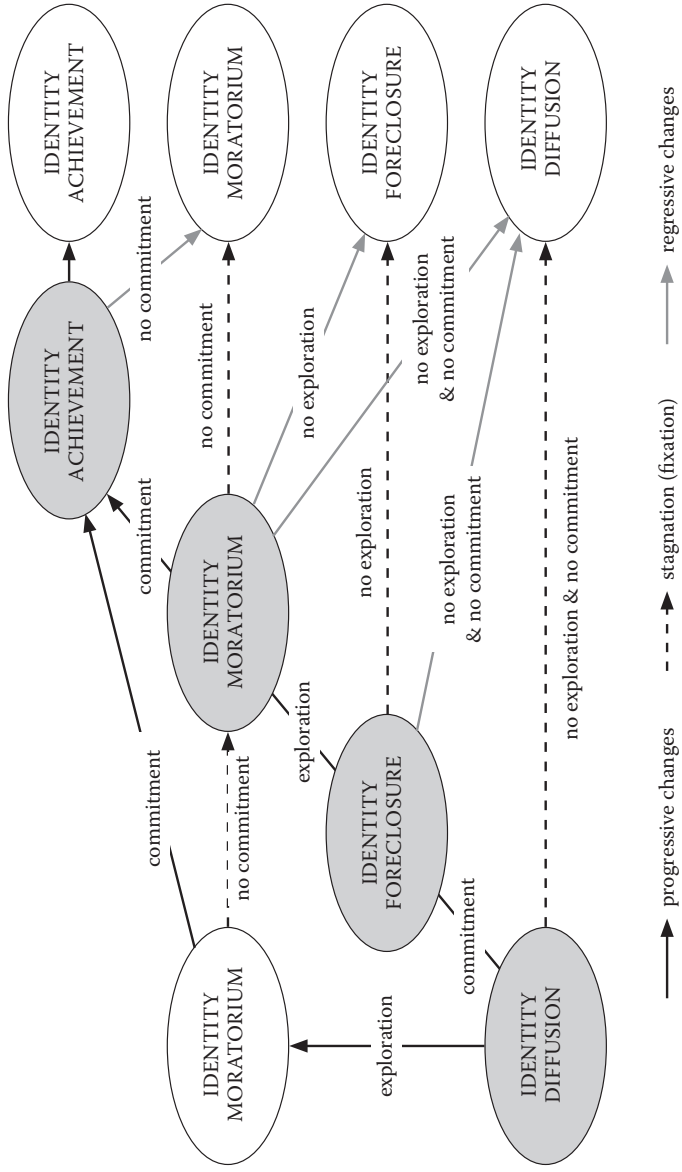


Figure 5. The model of progressive and regressive changes taking place in the process of identity formation according to Alan S. Waterman (1982)

transition is other people's consent to and encouragement of experimentation, but the scarcity or homogeneity of offers and opportunities for young people may result in the individual relapsing into diffusion and commencing the laborious process of identity formation again, from the start, after several failures to find anything attractive for themselves. Remaining in the stage of diffusion is the main cause of delayed entry into adulthood (cf. Chapter 1).

STAGE 2. IDENTITY FORECLOSURE

The situation involving a sense of diffusion is emotionally uncomfortable, both for the teenager and for his or her closest others. This discomfort is a natural source of motivation to change, an encouragement to look for something that will help define who one is and what one wants, and that will, as a result, contribute – for some time at least – to an improvement in functioning. The teenager starts to look for ideas that will give meaning to his or her activities and help control the sense of chaos; the teenager also begins to look for people whom he or she could trust and be accepted by and whom he/she expects to relieve him/her of the effort of making decisions regarding further explorations. The emergence of such tendencies in functioning is an indicator of entry into the stage of identity foreclosure (mirror identity, adopted identity) – identity handed down by the adolescent's significant others.

This identity status means that the individual adopts as his or her own someone else's evaluation standards, principles of conduct, religious beliefs, or professional choices, and that he or she adopts them without prior verification. Additionally, the teenager has a tendency to idealise the people and groups he or she identifies with. Having found someone or something to reduce his or her sense of discomfort, the young person is strongly attached to the current situation and resists changes. The person begins to behave in an uncompromisingly principled way, which is difficult to bear for others, especially for parents and teachers.

Remaining in this state for too long (stagnation) results in a narrowing of the scope of activity and in selecting the group of people that the teenager wants to be in contact with, thus limiting the opportunities for development. For young people with identity foreclosure, the chance for development towards identity achievement (progressive change) lies in adequate support from other people – mainly cognitive in this phase of identity formation. Questions from significant others encourage reflection on the meaning of one's choices and the point or pointlessness of adhering to them. Another important thing is social comparisons, which require rich and diverse social contacts, difficult to have in an environment excessively controlled by adults. Also significant is the shar-

ing of one's ideas of life with others and looking for ways to implement them together with others. All this may be a source of doubts, but above all it enables looking at a given problem or situation from a different point of view, changing the cognitive perspective. A serious risk factor is the excessive homogeneity and closed character of the social environment, which sometimes makes it totally impossible to learn different points of view and obtain material for reflection.

STAGE 3. IDENTITY MORATORIUM

If a person with identity foreclosure begins to feel disappointment with the previously made choices and have doubts about them – that is, if a sense of dissonance and discomfort appears, the conditions will be appropriate to move on to the next stage of development and attain the status of identity moratorium (postponement). This will be a progressive change, since – despite the experience of confusion and sometimes even chaos – moratorium is a time of actively and, what is important, independently looking for something that will be not only attractive for the teenager but also consistent with his or her needs and values. For this reason, the teenager intensively explores the close and distant environment in order to become acquainted with the offer available.

What is characteristic for the moratorium stage is frequent changes of interests, tastes, and decisions regarding personal engagement, as well as commitments to radically different and sometimes contradictory ideologies. Numerous risky behaviours appear, which involve putting one's physical endurance and psychological resilience to the test. Despite the concern of close others, that time of testing oneself in various roles, relations, and circumstances is necessary for the person to make a fully informed choice of his or her way of life in the near future.

The condition of success of the moratorium stage in the process of identity formation is adults' consent to and acceptance of these explorations, while at the same time inspiring teenagers with the belief, based on trust, that the necessary support will arrive when it is needed. Thus, exploration accompanied by a sense of adults' acceptance is conducive to the achievement of the main goal of these risky explorations – independently building (achieving) one's personal identity.

Supporting adolescents in their moratorium stage is based not only on showing acceptance or ensuring physical safety and a sense of security. Factors whose significance to teenagers' choices can hardly be overestimated are the quality and diversity of the offer proposed by culture (including the mass media), society (parents, the peer group, authorities, the local community), and various institutions (school, the Church, community centres, sports clubs,

volunteer work). The probability of making a choice good for oneself and at the same time valuable to others increases when the proposals for young people: (1) are promoted by someone with authority, whose opinions are valued in a given community; (2) stem from socially accepted systems of values and offer a chance to cooperate with other people; (3) make it possible both to fulfil one's personal needs and to meet the expectations of others. Once again, it is therefore worth stressing the immense importance of the social context of development, and above all – of young people's relations with significant others – to the modification of their attitudes towards themselves and the world. However, to support teenagers in their search for identity, adults must themselves exhibit mature personality traits and have a formed mature personality.

Another possible resolution of identity crisis is remaining in the moratorium phase and evasion of commitment making (stagnation). Although for some time such a situation may be a source of pleasure, in the period before entry into adulthood, when some peers already have certain occupational prospects and a stable personal life, which gives them support in difficult life situations, prolonged moratorium may again result in diffusion and the identity confusion connected with it (regressive change). Remaining in the moratorium stage is one of the main causes of delayed entry into adulthood (cf. Chapter 1).

STAGE 4. IDENTITY ACHIEVEMENT

Social consent to moratorium combined with the experience of support and a sense of acceptance from significant others makes it possible to bring the moratorium stage of identity formation to an end and move on to the next one – to the stage of developing the identity achievement status. This happens when, after a period of seeking (exploration and experimentation), the young person makes a choice and makes at least preliminary decisions regarding who he or she is, what he/she wants to be like, and what he/she wants to do in life; the person also starts to engage emotionally and cognitively in the commitments that stem from these decisions.

This kind of identity structure – attained through one's own orientational, exploratory, and decision-making activities – unifies the experiences accumulated so far, integrates them with earlier ones, and thus becomes a strong basis for a new, more mature way of functioning. A sign of this maturity is the growing awareness of resources and limitations – both personal and community-related. As a result, the young person's growing sense of continuity in time and space at the threshold of adulthood creates conditions for realistic and stable self-appraisal, independent of external circumstances and other people's opinions.

The model of identity formation proposed by Waterman is one of the possible conceptualisations of this complex process. It is not always possible to distinguish four consecutive stages, connected with the development of a particular identity status – diffusion, identity foreclosure, moratorium, and achievement. The sequence, therefore, is not unchangeable and not always the same in all adolescents. Apart from this point of departure, there is an assumption here that this feeling of discomfort, maladjustment, “identity confusion,” or – as Marcia called it in his early texts – the sense of “being in crisis” triggers the young person’s actions, thus in fact launching the process of identity formation. Regardless of what status the young person enters adulthood with, what he or she has achieved significantly affects his or her well-being and quality of social functioning not only in the early stage of adulthood (Luyckx, Klimstra, Duriez, Van Petegem, & Wim Beyers, 2013), but also later.

4.5. Dual-cycle model of identity formation according to Koen Luyckx

James E. Marcia’s (1966) model of identity formation, postulating the existence of two dimensions (exploration and commitment) and four identity statuses (combinations of high and low levels of the two dimensions) has undergone frequent extensions and modifications (cf. the history of this theory – e.g.: Meeus, 1996; Schwartz, 2001; Côté & Schwartz, 2002). This model was the basis for numerous studies on identity statuses. From 1966, when Marcia published his first paper devoted to these issues, titled “Development and Validation of Ego Identity Status,” until 2006, 287 articles were published (cf. the results of meta-analysis presented in Kröger, Martinussen, & Marcia, 2010⁴). The modifications of the model consisted mainly in the introduction of new dimensions of identity development. This resulted from the analysis of the content and meaning of the dimensions introduced by Marcia in the process of identity formation and from the confrontation of his idea and its modifications with empirical evidence.

It was pointed out a long time ago (Grotevant, 1987) that exploration may consist not only in discovering new areas but also in discovering their specificity. Other scholars (Meeus, Iedema, & Maassen, 2002), who distinguished two types of exploration: in breadth and in depth, drew attention to their different places and functions in the identity formation process. In 1986, Harke Bosma (cf. Bosma, 1992) distinguished two commitment-related dimensions:

⁴ Data from PsycINFO and ERIC.

commitment making and identification with commitment. Before it reaches the mature form towards the end of adolescence, commitment goes through a phase of learning to make commitments and a phase of identifying with the consequences of the decisions made (Bosma & Kunnen, 2001).

Koen Luyckx, Luc Goossens, Bart Soenens, Wim Beyers, and Maarten Vansteenkiste (2005) made an attempt to integrate the four dimensions of identity development in the form of a four-factor model, presenting the identity formation process in terms of two cycles. In Cycle I, called the commitment formation cycle (Luyckx, Goossens, & Soenens, 2006), two processes alternate, both of which are present in Marcia's (1966) classic model, namely: exploration (referred to as "exploration in breadth" here) and commitment making. Exploration in breadth keeps extending to new areas and becomes increasingly broad. Its negative correlation with the indicators of decision making and learning to make identity choices, confirmed in many empirical studies, may attest to the fact that in this phase of identity building the individual experiences a crisis, subjectively perceived as a sense of confusion and chaos, numerous existential doubts, and uncertainty, which interferes with simultaneously making and implementing choices concerning oneself.

In Cycle II, which scholars refer to as the commitment evaluation cycle, exploration occurs again, but its nature is different. This second kind of exploration – in depth – consists in testing the value of the areas with regard to which the individual has already made preliminary decisions (positive and negative) in the previous cycle. This explains the positive correlation between the exploration that one engages in to make sure that the previously made choice was the right one and the certainty about the preliminary decision having been right or wrong, which increases as new information is obtained. The more fruitful is the exploration in the second cycle, the more premises there are for making the final decision and to identify with the choice made (identification with commitment). It has been observed (Luyckx, Goossens, & Soenens, 2006) that identification with commitment becomes weaker with time and therefore has to be "fuelled" with further information acquired in the process of exploration in depth.

It has also been observed that there is a positive correlation between the two types of exploration (from Cycle I – in breadth, and from Cycle II – in depth), since both serve to acquire information important for the individual, and a correlation between making the final decision and identification with commitment. Research has shown that the two cycles intertwine, and that only the understanding of their interplay makes it possible to understand the type of change (regressive or progressive) or the lack of change (stagnation) of identity statuses.

This model was empirically tested (Luyckx, Goossens, & Soenens, 2006; Luyckx, Goossens, Soenens, & Beyers, 2006). Research conducted four times over a period of two years on college students showed that both dimensions of the first cycle and exploration in depth from the second cycle intensified during the two years, while the intensity of identification with commitment (a Cycle II factor) decreased. Statistical analyses demonstrated that the two cycles intertwined, which means identity forms through an alternation of exploratory activities different in nature (in breadth / in depth) and decision-making activities. Identity formation is thus a highly dynamic process.

Further studies and analyses resulted in the construction of the five-factor model (Luyckx, Schwartz, Berzonsky, Soenens, Vansteenkiste, Smits, & Goossens, 2008). It was observed that orientational and exploratory activities were sometimes accompanied by anxiety and depressive reactions rather than by curiosity and cognitive openness. This fifth dimension is ruminative exploration, clearly maladaptive and dysfunctional (cf. Peled & Moretti, 2010; Peters, Smart, Eisenlohr-Moul *et al.*, 2015). Exploration in breadth and in depth, by contrast, are adaptive (they are also referred to as reflective exploration)⁵.

Another outcome of work on the new model of identity formation was a new instrument – *Dimensions of Identity Development Scale* (DIDS), measuring the level (intensity) of dimensions of identity development (Polish adaptation: Brzezińska & Piotrowski, 2010). Based on the pattern of scores on the five dimensions measured by DIDS, identity status can be determined. According to Koen Luyckx, Seth J. Schwartz, Michael D. Berzonsky *et al.* (2008), the levels of both types of adaptive exploration and (maladaptive) ruminative exploration make it possible to distinguish and qualitatively differentiate between the statuses of diffused diffusion and ruminative moratorium. These five dimensions of identity development – the two “old” ones distinguished by Marcia and the three “new” ones – define the classic four identity statuses, based on classification into four predefined categories, as accurately as they define the statuses distinguished on the basis of cluster analysis (Table 2).

⁵ Cf. the study by Tomasz Jarmakowski (2011) on the role of rumination in the genesis of the learned helplessness syndrome. Ruminative thought – as defined by Susan Nolen-Hoeksema (2008, p. 400) – “involves repetitively and passively focusing on symptoms of distress and on the possible causes and consequences of these symptoms ... [but] does not lead to active problem solving to change circumstances surrounding these symptoms. Its opposite is reflective thinking, which consists in „analysing one’s own negative emotions in order to understand their determinants and change the strategy of action in a given area. It is thinking focused on seeking a problem solution, while rumination in the face of negative emotions is typical ‘chewing over’ thoughts, which does not lead to any conclusions, decisions, or changes in the current behaviour” (cf. Jarmakowski, 2011, p. 63).

Koen Luyckx and colleagues (Luyckx, Goossens, Soenens, Beyers, & Vansteenkiste, 2005) analysed their own abundant empirical data, testing the model of identity formation developed by James E. Marcia (1966) and the conception of identity status change proposed by Alan S. Waterman (1982, 1999). They hypothesised that both exploration and experimentation as well as decision and commitment making and engaging in the implementation of decisions and commitments are complex and intertwining processes, comprising many stages. Both processes are present in the early and late phases of adolescence, contrary to what Marcia believed when he attributed exploration (stemming from resignation and a sense of confusion: “being in crisis”) to the earlier phase, and readiness to make decisions and to engage in their implementation as well as to meet commitments (based on strong beliefs regarding the correctness of one’s choices) – to the later phase.

Table 2. Identity Statuses According to James E. Marcia and Dimensions of Identity Development According to the Five-Factor Conception

Dimensions of identity development	Type of identity	Identity diffusion “before crisis”		Identity moratorium “struggling with the crisis”		Formed identity “after crisis”	
	Identity status	Diffused diffusion	Carefree diffusion	Moratorium	Ruminative moratorium	Foreclosure	Achievement
Classic dimensions according to Marcia	Exploration in breadth	low to moderate	low to moderate	high	high	low	high
	Commitment making	low	low	low to moderate	low to moderate	high	high
New dimensions	Exploration in depth	low to moderate	low to moderate	high	high	low	high
	Identification with commitment	low	low	low to moderate	low to moderate	high	high
	Ruminative exploration	high	low	low to high	low to high	low	low

Based on: Luyckx, Goossens, Soenens, Beyers, & Vansteenkiste, 2005; Luyckx, Schwartz, Berzonsky, Soenens, Vansteenkiste, Smits, & Goossens, 2008.

The main difference between Marcia’s two-stage model and the dual-cycle model of identity formation proposed by Luyckx and his team (Luyckx, Goossens, Soenens, Beyers, & Vansteenkiste, 2005) is that in the former exploration is a process typical of the early phase of adolescence while commitment is typical of the later phase. In the other model, exploration and commitment are two complex – rather than homogeneous – and interdependent processes,

intertwining in the course of the entire period of adolescence at an increasingly high qualitative level, resulting – if the whole process is successful – in a formed identity (according to Marcia – only in identity achievement, and according to Luyckx – also in identity foreclosure). The difference between the two types of formed identity concerns two dimensions (cf. Table 2). Both exploration in breadth and exploration in depth are lower in people with identity foreclosure and higher in individuals with identity achievement.

To sum up: firstly, the dual-cycle model of identity formation does not assume the existence of only two distinct and sequential phases in identity development; secondly, it describes the process of identity development lasting the entire lifetime, taking place in every stage of life. Different periods of life may be marked by the dominance of exploratory behaviours or ones connected with making decisions, making choices, and engaging in the implementation of the commitments made. Exploration in different forms is the most characteristic for childhood, when it is directed mostly to the world of objects, and for adolescence, when its object is the world of social relations and one's own attributes, including the systems of values, the ideologies connected with them, and visions of adult life. The construction of the system of commitments, though also rooted in childhood and connected with building and enhancing the child's sense of agency (personal causality), is the most dynamic during the transition from late adolescence to emerging or early adulthood (cf. Arnett, 2000).

In accordance with the dual-cycle model, both complex processes – exploratory and decision-and-commitment-related – intertwine, maintaining relative balance in each of the consecutive phases of development. There is a basic difference between James Marcia's model, which postulates two consecutive phases in identity development in adolescence and the achievement of a particular identity status that one enters adulthood with, and the model proposed by Koen Luyckx and colleagues, stressing that identity develops in two cycles and is constantly redefined and, consequently, modified depending on the offers of the environment and on the individual's own activity.

4.6. The process of identity formation according to John H. Flavell's theory of developmental changes

Based on the model proposed by John H. Flavell (1972), distinguishing five types of changes in the process of development, it can be said that in the process of identity formation and identity form (status) modification we are in fact dealing

with one primary (identity development) and three lower-order developmental processes taking place on different levels (Figure 6).

The first lower-order process – in the mainstream of identity formation – is a sequence of steps divided into two cycles, describing the type of activities undertaken by the individual committed to building his/her identity and the feelings that accompany these activities:

- Cycle I: commitment formation [exploration in breadth → commitment making] →
- Cycle II: commitment evaluation [exploration in depth → identification with commitment].

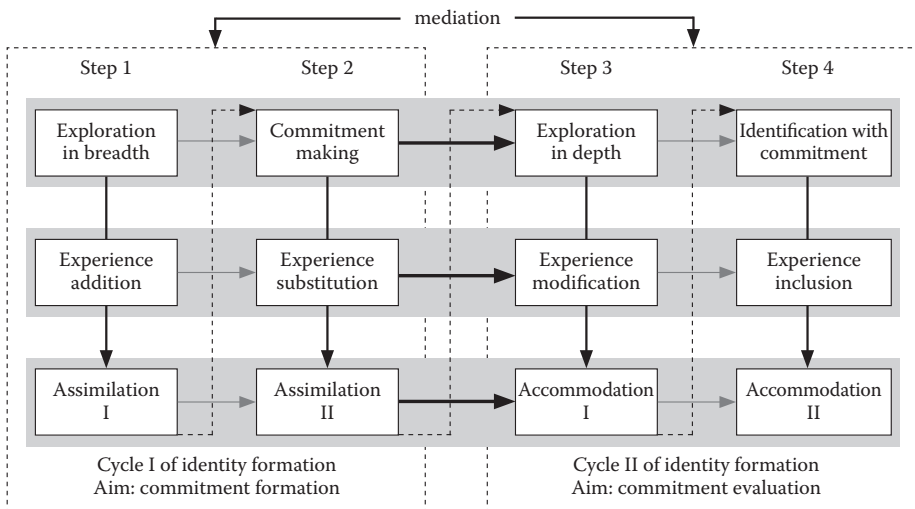


Figure 6. Identity formation according to Flavell's theory of developmental changes. Based on Flavell (1972)

The second lower-order process encompasses the changes taking place in cognitive structures. These changes stem from new information being gathered as a result of exploring the resources of the environment and one's personal resources, as well as from information being generated as a result of social comparisons and reflection and then verified in the process of making a choice, making a decision, and considering their consequences. Flavell believes that these changes make up a clear developmental sequence of mental operations and that their order is as follows:

- addition – organising new information and adding it to the already existing information;
- substitution – replacing old information with new;

- modification – transformation of the existing cognitive structures under the influence of new experiences;
- inclusion – integrating the old and new structures of experience and including them in the new whole: namely, the new cognitive structure.

The third lower-order process is the transition from assimilation in two forms – more and less mature – to accommodation, also in two forms. Mediation, the fifth type of change distinguished by Flavell, consisting in the previously created structures, indispensable as the basis of further change, playing the role of a link between assimilation and accommodation processes, and on the higher level of analysis – between Cycles I and II of identity formation.

In the first cycle of identity development (the commitment formation cycle), the intensive exploration of ideological alternatives and alternative activities, connected with discovering personal and the environment's resources, contributes towards a decision to engage in the implementation of the preliminary commitment. The aim is to collect as many new and diverse experiences as possible, to organise them, and then to integrate them with the experience already accumulated. In the early phase of adolescence, exploration in breadth provides many diverse experiences. They are incorporated into the already existing mental structures – internal working models. Developmental change in this case (addition) is cumulative in nature – it is Assimilation I according to Flavell's classification, when the existing cognitive structures are broad and flexible enough to include these new experiences. However, as exploration continues and its scope broadens, the newly acquired experiences “supplant” some old elements from the existing working models, resulting in substitution – that is, Assimilation II.

In the second cycle of identity development (the commitment evaluation cycle), exploration changes its character. Increasingly becoming exploration in depth, inquiring and verifying the previously made choices, it provides experiences so novel that the old mental structures can no longer hold them and undergo modification (Accommodation I), in order eventually to undergo disintegration (deconstruction) and reintegration. The emerging new structure includes elements of the earlier structure and all the new experiences gathered and organised in the second phase of exploration (exploration in depth). What follows, in Flavell's terminology, is inclusion (Accommodation II) – through inclusion, the new experiences have fundamentally transformed the previous internal working models (Figure 6).

The process of identity formation can therefore be divided into four stages:

- exploration in breadth provides abundant and diverse information; its result is the accumulation of new experiences, which consists in

- organising them and putting them into the existing cognitive schemas (Assimilation I);
- the next step is a decision concerning engagement in a given area and making a commitment; the analysis of the information collected in order to make the decision results in substitution: the replacement of old information – as incomplete and inadequate in the new situation, invalid, etc. – with the newly acquired information, still within the existing cognitive schemas (Assimilation II);
 - the third step is exploration in depth – the verification of the preliminary decision by acquiring and analysing further information; the critical analysis of new data results in a modification of the existing cognitive schemas (Accommodation I);
 - the fourth step is identification with the commitment made, reducing the perceived emotional tension and, on the cognitive level, resulting in inclusion – that is, in the integration of old and new experience and in the creation of a new cognitive schema (Accommodation II).

4.7. Differentiation of identity forms in adolescence: Hanoch Flum's research

A combination of stable personality and environmental factors with incidental situational factors can modify the process of identity formation in early and late adolescence in such a way that:

- one of the stages is dropped (removed from the sequence);
- a regression to one of the earlier stages occurs;
- the identity achievement status is not attained due to fixation on one of the earlier stages.

This means that, firstly, not everyone enters their adult years with the identity achievement status already formed; secondly, not everyone attains that status at all. Thirdly, Hanoch Flum's (1994a) research reveals that not everyone experiences "being in crisis," and so not in everyone does a sense of discomfort work as a motivation to change and not in everyone does it influence the process of identity formation.

The research conducted by Hanoch Flum (1994b) on students aged 14-18 ($n = 878$, 51% women) allowed for distinguishing three groups with identity statuses consistent with Marcia's model – identity diffusion, moratorium, and foreclosure. Of these three groups, only one (the moratorium group) was experiencing an identity crisis, while the other two were not. A group with identity achievement was not distinguished, but there emerged a group exhibiting an

“evolutive” style of identity formation. These students had experienced neither a sense of identity confusion nor symptoms of youthful rebellion; in other words, even though they had not experienced an identity crisis, they exhibited characteristics similar to those found in descriptions of identity achievement. They were characterised by a weak sense of distraction, strong internal orientation, openness to new experiences, a tendency to treat difficult situations as challenges rather than threats, low emotional dependence on parents combined with positive relations with them and with other significant adults, positive relations with peers combined with high ability to resist group pressure, and strong social commitment. In the relatively small group (99 students out of 878 participants in the study – about 11%) with “identity undergoing evolutionary change – without a crisis” there were significantly more male and female students from families with high socioeconomic status, and they tended to be older (17-18 years old). Table 3 presents the psychological characteristics of the types of identity distinguished in studies in relation to the intrapersonal and interpersonal dimensions of young people’s psychosocial functioning.

Table 3. Description of Identity Statuses in Hanoch Flum’s Research

Identity status	Intrapersonal level	Interpersonal level
Identity diffusion	<ul style="list-style-type: none"> – strong external orientation – low decisiveness – a sense of lack of control over one’s future – well-being strongly dependent on social approval 	<ul style="list-style-type: none"> – weak dependence on parents – strong asocial orientation with a low sense of trust in other people – strong dependence on peers – low ability to resist group pressure
Identity foreclosure	<ul style="list-style-type: none"> – strong external orientation – high and stable self-esteem – a strong sense of one’s future being controlled by external factors 	<ul style="list-style-type: none"> – strong dependence on one’s parents and other significant adults – weak need to be alone
Identity moratorium	<ul style="list-style-type: none"> – a strong sense of experiencing a crisis and “identity confusion” – a strong sense of “time flying” 	<ul style="list-style-type: none"> – strong need to be alone, but at the same time a strong fear of being isolated – low ability to resist group pressure
Evolutive identity – “without crisis”	<ul style="list-style-type: none"> – a weak sense of distraction – no sense of “identity confusion” – strong internal orientation – openness to new experiences – treating difficult situations as challenges rather than threats 	<ul style="list-style-type: none"> – high ability to resist group pressure – low dependence on parents – positive relations with one’s parents and other significant adults – positive relations with peers – strong social commitment

Based on Flum (1994b).

Interesting results were obtained in the analysis of the relations between the students' gender, age, and family status and their identity status. In the group with identity diffusion there were mainly boys of various ages, from families of low socioeconomic status. Age, gender, and family status were not related to identity moratorium and foreclosure statuses. In the relatively small group (99 out of 878 participants – 11%) classified as “without crisis” (identity undergoing evolutionary change) there were significantly more male and female students from families with high socioeconomic status, who tended to be older (17-18 years old). These results point to a considerable role of the quality of the family environment and relations with parents in the processes and ways of identity formation at the threshold of adulthood.

In a different study by Flum (1994a), in a group of 548 students aged 14-19, individuals with the evolutive style of identity formation were also found – in this case, they were present in every age group. They were characterised by a highly positive self-image. Flum cites the reports of other scholars, who found that people with the evolutive style exhibited a higher level of optimism, planned their life in a longer-term perspective, and more often came from families with democratic and authoritative upbringing accompanied by an open system of communication. This concerned particularly mother-daughter relations.

In the context of these studies, what becomes particularly important is the question of whether the experience of discomfort is a key factor activating the process of building personal identity. The research results obtained and the analyses performed by Flum (1994a, 1994b) show that it is not. This means that the motivation to build a mature form of identity in adolescence (i.e., identity achievement) may be triggered also by factors other than the sense of identity confusion.

5. Concluding Remarks

Identity formation begins already in early childhood, when the child enters into the first social relations with the caregiver, enabling him or her to discover his/her physical and psychological separateness. In the subsequent stages of development, inspired by curiosity, the child not only discovers different properties of the surrounding objects but also gathers self-knowledge and develops a stronger sense of separateness, sameness, continuity, and – finally – integrity.

From the perspective of identity development, childhood is, above all, exploration and accumulation of experience in the form of internal working models. Towards the end of childhood, there appears an increasingly intensive

tendency to use the experience gathered to implement plans, which in turn feeds back and leads to the modification of the person's cognitive schemas. As the person grows up, these plans have an increasingly broader time perspective, and at the threshold of adulthood they concern both near and distant future.

Consequently, what becomes immensely important is the quality of the environment in which the adolescent, and very soon the young adult, wants and has a chance to implement these plans. On the one hand, the number and diversity of opportunities, actually or potentially available, offers a chance to expand the areas of exploration and to experiment, as well as to decide on the direction of activity, the choice of goal, and the means of achieving it. On the other hand, the increasing mobility, instability, ambiguity, and liquidity (Bauman, 2000) of today's physical and social environment of older children and teenagers can be a source of dangers, making it difficult for them at the threshold of adulthood to make long-term life decisions, engage in their implementation, as well as identify with the choices made and with their consequences.

Chapter 3

DETERMINANTS AND CONSEQUENCES OF IDENTITY FORMATION



1. Introduction

Every stage of human development can be viewed from two perspectives: the perspective of time and the perspective of the quality of the environment – above all, the sociocultural environment. To refer to this dual background of development, Erik H. Erikson (1950) used the term “space-time.” The former perspective manifests itself in the integration of the past, the present, and the future, specific to each of the consecutive stages of life, and finds expression in the dominant temporal orientation, which determines not only each person’s lifestyle and everyday behaviour but also the functioning of entire groups of people – families, communities, and societies. The other perspective can be described in terms of the relations and interactions that a person enters into with other people as well as the groups, organisations, and communities whose activities he or she takes part in in a given period of life, more or less actively, also as an observer.

In her conception of three types of cultures, Margaret Mead (1970) links a specific attitude towards time with the organisation of social life and with intergenerational relations. In a postfigurative culture, glorifying the past and treating the oldest generation as a vehicle of values and life patterns with a mission of perpetuating them and passing them on to future generations, individuals with identity foreclosure will dominate. In a cofigurative culture, focused on the present and oriented towards the exchange of resources between younger and older generations, towards seeking common areas of activity, and towards cooperation, there emerge conditions conducive to the process

of independently constructing (achieving) personal identity. In a prefigurative culture, where the “figure” is the future, it is the younger generations that dominate. It is they that, being the most physically mobile (and today also the most active on the Internet), are the quickest to become agents of change; as a result, they more and more often act as teachers to middle-aged or older generations. Finding themselves the students of their children and students, and often confused in the world that is changing with increasing rapidity, parents and teachers cease to perform the function of stabilisers in the process of young people’s identity seeking and identity building. However, the rapidly changing environment as well as the lack of clear boundaries and support from parents and teachers lead to a situation of young people’s identity remaining in a state of diffusion for a long time or ceasing to develop beyond the moratorium phase.

Therefore, the organisation of the life environment and, as part of it, the educational environment is of great significance to the course and effects of the formation of identity foundations in the successive stages of childhood and then to the crystallisation of some form of identity in adolescence. Adolescence is the time of building group identity first and individual identity afterwards (Erikson, 1950). This means, in both cases, a change in the quality of relations with adults – sometimes sudden and radical, sometimes slight and barely noticeable to others. This change is, above all, a result of making independent attempts to find one’s place first in the world of peers (the phase of group identity formation) – outside the world of adults, and often in opposition to it. Only later activities are undertaken whose aim is either to place oneself in some already existing niche in the world of adults as a person distinct from them but also similar to them, being also an adult (the phase of developing individual identity in the form of foreclosure), or to actively create a new niche for oneself, in accordance mainly with the vision of one’s own future (the phase of developing individual identity in the form of achievement).

What plays an important role in the process of looking for one’s place in the world of adults is the resources of the family and school environment as well personal resources in the form of skills acquired in the successive stages of childhood and modified or replaced with new ones in adolescence.

2. Determinants and Consequences of Different Types of Identity

2.1. Lifestyles and the Form of Identity

What may be useful in answering the question of why people cope with satisfying their needs and fulfilling social expectations in the diverse, rapidly

changing, and unpredictable environment so differently may be the conception of lifestyles presented by Andrzej Siciński (2002). According to Siciński, the human being is a creature constantly making choices – homo eligens, since even

a particular culture constitutes a certain choice from the general repertoire (of signs, symbols, meanings, patterns, and values) of human culture. Lifestyle is constituted by choices at a 'lower level' rather than those concerning the whole of a given culture. ... A lifestyle is a manifestation of a certain principle (principles) of the choice of everyday activity patterns from the repertoire of behaviours possible in a given culture; it constitutes ... a kind of 'life strategy' (Siciński, 2002, pp. 78-79).

The possibility of making choices in the home and out-of-home life environment, different in each of the successive stages of childhood, adolescence, and adulthood, can therefore be regarded as the basic condition of development, while motivation and choice-related skills can be regarded as the basic competency that determines to what extent a person becomes an actual agent making his or her own decisions and having a sense of agency.

Proposing a typology of lifestyles, which can be called "stepwise," Siciński adopts several criteria for distinguishing them, related in a characteristic way. Meeting a given criterion enables transition to the next category; not meeting it means remaining in the current one (cf. Table 1). The first criterion can be treated as the sine qua non condition for developing a lifestyle adaptive in any way in a particular environment. It is the objective possibility of making choices in one's own natural and institutional environment – family (home) and neighbourly (close-to-home), local and regional, educational (school), and work environment. This criterion has an external character, since it refers to the environment's resources and is connected with the wealth, diversity, and physical as well as legal availability of activity offers, in both the physical and social environment. Further criteria all belong to one class, and have an internal character, since they refer to the individual's personal resources, including life orientation and various competencies, acquired in the previous stages of development – particularly the following:

willingness (readiness) to use the opportunities to choose; adherence (or nonadherence) to the established patterns of behaviour; autotelism or instrumentality of actions; finally, their conservative or innovative orientation (Siciński, 2002, p. 83).

Siciński (2002, pp. 83-86) briefly described the six lifestyles he distinguished:

- I. Blocked/limited style: satisfying one's needs and fulfilling the requirements of the environment in a situation of unavailable or severely limited opportunities of making choices.

- II. Withdrawing/avoidant style: avoiding choices, despite the objective possibility of choosing.
- III. Value-seeking/path-seeking style: using the opportunities of making choices, motivated mainly by looking for the value and meaning of life.
- IV. Here-and-now-focused style: making choices oriented mainly at the attainment of good well-being, with the process of task accomplishment or activity treated as a goal in itself.
- V. Conservative style: making choices oriented at maintaining the status quo, with a dominance of conservative activities, preserving the current circumstances; there are two varieties of this style: conformist and ritualistic.
- VI. Mature style: making choices oriented at activities and circumstances leading to change; there are two varieties of this style, too: revolutionary style (according to Siciński, 2002, p. 86, it means inducing change “through rebellion”) and innovative style (evolutionary change).

A comparison of these brief descriptions reveals that only the last lifestyle – mature innovative or mature revolutionary – can be regarded as adaptive in a rapidly changing environment (cf. Smykowski, 2012). A person who objectively has numerous opportunities in his or her environment to make choices from among diverse and changing offers, and who is aware of their existence, which means that – independently or with help from other people (parents, teachers, advisors, coaches, colleagues) – he or she notices them, distinguishes them, and is able to assess their value, begins to explore various possibilities of activity, freely examine these offers, test them, and analyse them from the point of view of his or her own values and the related plans. The accumulated knowledge allows the person to make decisions or choices with high self-confidence and high trust in the environment – or to refrain from making a choice in cases when he or she is aware of the possible negative consequences of a given decision and when judging his or her own skills as insufficient to cope with them.

A person with a mature lifestyle – innovative or revolutionary – is therefore in a situation that is the most conducive to development, both individual (satisfying universal needs, age-specific and individual, including special needs – cf. Brzezińska, Jabłoński, & Ziółkowska, 2014) and social, i.e. fulfilling the expectations of the environment or refusal to fulfil them when one is aware of the consequences of this refusal. This is the case mainly because the person is able to considerably modify the environment or even create an optimal environment for themselves. His or her diverse exploratory and decision making activity results in individual experience becoming not only richer but also

qualitatively diverse. The cognitive schemas possessed, shaped on the basis of earlier experience, undergo modification as a result intensive accumulation (addition) of new experience and the substitution, or replacement, of old experience with new; thanks to the incorporation (inclusion) of more and more new experiences, the cognitive schemas finally undergo accommodation – namely, significant qualitative transformation, “retuning” the person’s functioning (cf. Flavell, 1972; also Chapter 2, section 4.6.).

It can be said that, on the one hand, a mature lifestyle oriented at making changes requires courage, cognitive curiosity, openness, and flexibility in thinking, while on the other hand it demands criticism, readiness for reflection and self-reflection as well as perseverance in the pursuit of one’s plans. All these traits develop as a result of the choices made and the necessity of modifying one’s behaviour in accordance with the changing circumstances, the changes sometimes being rapid.

This duality of processes involved in the formation of a mature lifestyle – requiring, on the one hand, orientation at activities undertaken to cope with changes, and on the other, orientation at activities leading to changes – points to two kinds of competencies enabling individuals to use the objective opportunities of making choices that exist in their life environment. The first group is emotional competencies and motivation, emotional self-control, and readiness to engage and persevere in activities; the other group is cognitive competencies, connected with making decisions in a situation of uncertainty. The same kinds of competencies are involved in the process of identity formation, taking place from childhood but culminating in the final phase of adolescence.

Thus, according to Siciński’s model, individuals with identity diffusion can be classified as representing Type I lifestyle (activity in a situation of no or limited possibilities of making choices) or Type II lifestyle (avoidance of making choices), depending on whether or not they have the objective possibility of choosing (if not – Type I) and on whether or not they are aware of this and have the courage to do this (no awareness, or awareness but no courage to make a choice – Type II). Individuals with identity moratorium can be classified as representing Type III (looking for the value and meaning of life and for one’s own life path) or Type IV lifestyle (orientation at activity as a goal in itself). People with identity foreclosure could be characterised as representing Type V lifestyle, involving a conservative orientation (conformist or ritualistic), and people with identity achievement – as representing Type VI lifestyle, being a mature one with strong orientation at engaging in activities that lead to a change of the current states of affairs (in a revolutionary or evolutionary way – cf. the studies by Flum, 1994a, 1994b).

Table 1. Types of Lifestyle According to Andrzej Siciński and Identity Statuses

Lifestyle	I.	II.	III.	IV.	V.	VI.
	Blocked, limited	Withdrawing, avoidant	Value-seeking / path-seeking	<i>Here-and-now- focused, carpe diem</i>	Conservative: conformist / ritualistic	Mature: innovative / revolutionary
Form of identity	Unformed identity (precrisis phase)		Identity moratorium (being "in crisis")	Formed identity (postcrisis phase)		
Personal and environmental resources	Diffused diffusion	Carefree diffusion	Ruminative moratorium	Undifferenti- ated identity	Identity foreclosure	Identity achievement
Opportunities to make choices	<p>there are no opportunities to make choices:</p> <ul style="list-style-type: none"> - poverty and no offers - closed environment and homogeneous offers - lack of physical access to offers - lack of approval for choosing 			<ul style="list-style-type: none"> - offers in the physical and social environment are numerous and diverse - offers in the physical and social environment are available (accessible) - the possibility of making choices is legally guaranteed - the possibility of making choices is approved by custom - there is clear consent, and even encouragement from the family and school environment to seek offers, modify them according to one's needs, and create them - clear consent and encouragement to make choices 		
Cognitive and emotional readiness to use the opportunities to make choices		lack of readiness to explore and unwillingness to make choices			<ul style="list-style-type: none"> - the person is interested in the environment, curious, and cognitively open - the person is ready to look for offers appropriate for himself/herself and to engage in exploratory activities - the person would like to make choices because he/she can see their meaning and therefore is willing and motivated to make them 	

<p>Mastered instruments for exploring offers and making choices</p>				<ul style="list-style-type: none"> - the person is eager to learn – to broaden his/her knowledge and acquire new skills - the transmission of ready message from others or one's own exploration dominates
<p>Motivation for activity: autotelism (functional pleasure) or usefulness (instrumentality)</p>		<p>the use of old knowledge and skills dominates</p>		<ul style="list-style-type: none"> - both the goal and the means of its achievement are important - the source of pleasure is the possibility of acting and achieving the goal - higher persistence and lower sense of frustration in a situation of failure (when the goal is not achieved)
<p>Direction of activity: orientation at achieving the goal (undertaking and completing a task)</p>		<p>focus on activity: activity is the aim in itself / a source of pleasure</p>		<ul style="list-style-type: none"> - preserving the <i>status quo</i> - there are no questions about what purpose the tasks serve or could serve - close tasks, short-term perspective
<p>Meaning of activity: effecting a change by accomplishing the task</p>				<ul style="list-style-type: none"> - striving to effect a particular change - distant tasks, long-term plans

Based on the theory of lifestyles proposed by Andrzej Siciński (2002, pp. 82-86).

2.2. Psychosocial functioning and identity status

The identity status at the threshold of adulthood is the outcome of the integration of experience accumulated in childhood and adolescence; it constitutes a kind of end product of past development, and at the same time it constitutes a frame of reference for further choices made with the future in view. Many scholars conducting research on identity specify traits distinguishing individuals characterised by its different forms.

In 2013, Jane Kröger and colleagues (Martinussen & Kröger, 2013) published a series of articles¹ that show what personality traits are found in people with different types of identity, distinguished based on James Marcia's (1966) conception of identity statuses. Separate analyses were performed for studies on differences between people with different identity statuses (Table 2) in terms of the level of ego development (Jespersen, Kröger, & Martinussen, 2013a), anxiety (Lillevoll, Kröger, & Martinussen, 2013a), authoritarianism (Ryeng, Kröger, & Martinussen, 2013b), self-esteem (Ryeng, Kröger, & Martinussen, 2013a), locus of control (Lillevoll, Kröger, & Martinussen, 2013b), and moral reasoning (Jespersen, Kröger, & Martinussen, 2013b). A total of 25 articles and 40 doctoral dissertations were qualified for these six meta-analyses². The participants in the studies analysed were mostly university students and, occasionally, secondary school students as well as employed non-students.

Analyses concerning the relationship between the type of identity status according to James Marcia and the phases of ego development (preconformist, conformist, and postconformist³) according to Jane Loevinger (cf. Jespersen,

¹ The authors analysed empirical studies – articles and doctoral dissertations – conducted and published between 1966 and 2005, during the 40 years after the publication of James E. Marcia's (1966) first study, in which he presented his conception of four identity statuses. In four databases – PsycINFO, ERIC, *Sociological Abstracts*, and *Dissertation Abstracts International*, using four search phrases: “identity status,” “identity and Marcia,” “identity and Marcia's,” and “ego identity,” they found 565 publications. These included 287 articles and 278 doctoral dissertations.

² The criteria of qualifying the articles and doctoral dissertations found in databases for meta-analysis are presented in the introductory article (Martinussen & Kröger, 2013) of the thematic issue of *Identity: An International Journal of Theory and Research*, 2013, 3(13), titled *Meta-Analytic Studies of Identity Status and Personality*.

³ In the preconformist stage the child is guided by impulses that he or she does not control, strives for the quick gratification of his or her needs and for the elimination of the perceived tension. In the conformist stage, strong identification with others and with the group causes strong identification with the performed social roles, beliefs, and activities accepted by the environment; one's own self in this stage is a group self. The third, post-conformist stage concerns people emotionally independent of the environment, willing to

Table 2. Sources Used in Meta-Analyses by Jane Kröger and Colleagues

Correlates of identity status	Empirical studies from 4 databases	Studies qualified for meta-analysis				Number of participants (aggregate data)*			Mean age
		articles	PhD theses	total		women	men	total	
				<i>n</i>	%				
Level of ego development	14	4	7	11	79	616	247	943	30.5
Anxiety	27	5	7	12	44	638	429	1124	23.6
Authoritarianism	14	4	5	9	64	443	418	861	21.3
Self-esteem	35	7	11	18	51	1996	1913	4188	22.9
Locus of control	19	2	3	5	26	398	313	711	23.1
Moral reasoning	17	3	7	10	59	436	375	884	21.8
Total	126	25	40						

Note. * The sum of the number of men and women is not always the same as the number of subjects given in the column labelled “total” because, according to the authors of the meta-analysis, in some of the analysed studies the authors gave only the overall value of *n* without gender division.

Based on the sources given in the text; cf. Martinussen & Kröger, 2013.

Kröger, & Martinussen, 2013a) revealed a moderate positive correlation ($r = .35$, $R^2 = 12\%$) between identity status and ego development stage. During the division of statuses into two categories, it turned out that individuals with “high” statuses – identity moratorium and achievement – were in more advanced stages of ego development: they were more postconformist than individuals with “low” statuses (identity diffusion and foreclosure). In the case of identity achievement, a strong association with the postconformist stage was found. However, contrary to expectations, individuals with the foreclosure status were in the conformist and postconformist stages. The authors of the meta-analysis explain this result as stemming from the probably high internal diversity of the group with the foreclosure status. By analogy with an earlier study (Kröger, 1995), they believe that this group may have been composed of individuals whose status was already a stable one of firm foreclosure (in Kröger, 1995, such subjects made strenuous efforts to gain social approval), who would probably have been classified as representing the conformist stage, and individuals with the dynamic form of developmental foreclosure, characterised by a potential

engage in reflection, with values internalised as a result of their own activity, tolerant of ambiguity, respecting other people’s autonomy, and entering into relations with others on a reciprocal basis (as reported in: Jespersen, Kröger, & Martinussen, pp. 230-231).

for progressive change – towards moratorium and then towards identity achievement.

Pointing out the role of anxiety as differentiating the types of identity status, the authors of another meta-analysis (Lillevoll, Kröger, & Martinussen, 2013a) refer to research that revealed a low level of anxiety in subjects with identity foreclosure and a higher level of anxiety in subjects with identity moratorium and pointed to the differentiating role of gender. For this reason, they performed comparisons of anxiety level separately for each pair of statuses for each gender. The analyses showed that anxiety was indeed the lowest in individuals with the foreclosure status. According to one of the explanations (cited from Marcia, 1967), the low generalised level of anxiety in these people may be a result of their behaviour conforming to what they believe to be socially acceptable. Although this manner of adaptation is superficial and deceptive, it does protect against “exploratory anxiety” and uncertainty, and this in turn allows a person to make decisions more quickly and takes the responsibility for these decisions off the person. James E. Marcia and Meredith L. Friedman (1970) point out that individuals with this kind of identity foreclosure may receive relatively more support and care from their closest environment, which may significantly reduce the level of anxiety. Jane Kröger (data from: Kröger & Haslett, 1987, and Kröger, 1993; as cited in: Lillevoll, Kröger, & Martinussen, 2013a) draws attention to the fact that these people less often seek circumstances that could be a challenge for them or pose a threat to their identity. Citing other explanations as well, the authors of the meta-analysis formulate an interesting conclusion:

The foreclosure identity status, in general, appears to function as a type of buffer against generalized anxiety, almost regardless of gender (Lillevoll, Kröger, & Martinussen, 2013a, p. 223).

This form of identity would therefore be adaptive in rapidly changing environments, particularly where the competencies needed to cope with challenges in conditions of uncertainty are insufficient.

The next analysis concerned the relationship between the type of identity status and the level of authoritarianism (Ryeng, Kröger, & Martinussen, 2013b). Of the 565 texts investigating identity statuses according to James Marcia and published in 1966-2005, only 13 (2.3%) directly addressed the issue of differences in the level of authoritarianism between people with different identity statuses, and only nine of them (with a total of 861 subjects) met the criteria for inclusion in the meta-analysis. It turned out that, in all these studies, subjects with identity foreclosure exhibited a significantly higher level of authoritarianism than subjects with the remaining identity statuses. Differences between

subjects with the statuses of achievement, moratorium, and diffusion were not statistically significant.

It is worth noting that Erikson (1968) was aware of the danger of rigidity in the case of identity foreclosure, and he believed its main characteristic to be the exclusion of everyone who seemed to pose a threat to the individual because they were different from him or her. He referred to the form of identity thus developed as “pseudospeciation,” which he regarded as “one of the most sinister aspects of all group identity” (Erikson, 1968, p. 42). He also believed that an authoritarian stance (Erikson, 1968):

An authoritarian stance “[invites] men ... to project total badness on whatever inner or outer ‘enemy’ can be appointed ... as subhuman ... while the converted may feel totally good as a member of a nation, a race, or a class blessed by history (p. 86).

The relationship between the type of identity status and authoritarianism was found already by James Marcia, the originator of the theory of identity statuses. In his first publication, in which he presented the results of research on the types of identity statuses (Marcia, 1966), authoritarianism measured by means of the F Scale (cf. Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950) was one of the traits used to describe people with different statuses. The remaining factors investigated were: maintaining the direction of activity in stress conditions, the level of aspirations, and the stability of self-esteem. The participants in that first study were a group of 86 college students. The four identity statuses were represented similarly often: diffusion – 24% of students, moratorium – 27%, foreclosure – 28%, achievement – 21%; the group with the lowest level of authoritarianism were students with the achievement status, and the group with the highest authoritarianism were those with identity foreclosure⁴.

The analysis of the association of the type of identity status with global self-esteem – understood as “one’s positive or negative attitudes toward oneself, degree of self-respect, self-worth, and faith in one’s own capacities” – yielded ambiguous results (Ryeng, Kröger, & Martinussen, 2013a, p. 201), even though identity theories strongly link the form of identity with the level of self-esteem. The authors analysed the collected data in the light of two competing models. The first model posits that self-esteem is high in individuals with “high” identity statuses and low in those with “low” statuses, namely: [identity achievement \approx moratorium] > [identity foreclosure \approx diffusion]. The other model links the level of self-esteem with the dimension of commitment making and engage-

⁴ An analysis of the results of other studies investigating the relationship between the type of identity status and the level of authoritarianism can be found in the study by Brzezińska, 2017.

ment, positing that self-esteem is low in individuals lacking commitment and engagement. The analyses performed did not make it possible to determine which model explains the observed associations more accurately, though the studies showed high self-esteem to be related to those statuses in which the commitment making dimension was strong. It turned out that subjects with the statuses of identity achievement and foreclosure had similarly high levels of self-esteem, and that the level of self-esteem was similarly low in people with identity diffusion and moratorium statuses.

The analysis of the relationship between locus of control and the type of identity status did not yield clear results, either (Lillevoll, Kröger, & Martinussen, 2013b). One of the reasons for this was probably the small number of studies qualified for meta-analysis – only five ($n = 711$; aggregate data). Based on earlier studies, the authors expected internal locus of control in subjects with identity achievement and external locus of control in subjects with identity diffusion. Although all correlations were consistent with the expectations, the effect size was negligible. The strongest correlation obtained was .26 ($R^2 = 7\%$), between identity achievement and internal locus of control. The results showed that in each group with a particular identity status there were subjects with internal as well as external locus of control. However, the authors conclude that

the findings suggest that the prevalence of the external locus of control position diminishes with identity maturity as the internal locus of control position increases (Lillevoll, Kröger, & Martinussen, 2013b, p. 263).

The last of the analyses performed by Kröger and colleagues concerned the differences between individuals with different identity statuses in terms of the stage of moral reasoning according to Lawrence Kohlberg (Jespersen, Kröger, & Martinussen, 2013b). Its results showed, above all, that individuals with identity achievement significantly more often exhibited postconventional moral reasoning. At the same time, very low correlation was observed ($r = .15$, $R^2 = 2\%$) between identity status and the level of moral reasoning. An unexpected result was the lack of relationship between identity foreclosure and the conventional stage of moral reasoning. Still, these findings are consistent with the results of the meta-analysis concerning the level of ego development (Jespersen, Kröger, & Martinussen, 2013a) and locus of control (Lillevoll, Kröger, & Martinussen, 2013b). In those three analyses, subjects with identity foreclosure turned out to be the least coherent and the most internally diverse group, and this is probably why they were the most difficult to classify into the category of “low” identity status together with individuals exhibiting unformed identity – i.e., identity diffusion.

3. Psychological Factors and Identity Formation

3.1. Cognitive factors: styles of processing identity problems

The model of the cognitive mechanisms involved in identity formation is based on the conception and operationalisation (in the form of different versions of the ISI – *Identity Style Inventory*⁵; cf. Berzonsky, Soenens, Luyckx, Smits, Papini, & Goossens, 2013; see also: Ciecuch, 2010; Senejko, 2010) proposed by Michael R. Berzonsky (1989). He distinguished three cognitive orientations (styles) connected with exploring and processing information for the purpose of identity formation: informational, normative, and diffuse-avoidant⁶:

1. Informational processing orientation – the informational style of processing identity problems – is characteristic of people who actively seek information related to the self and explore the environment in order to get to know themselves better. They are critical and self-reflective about beliefs concerning themselves and the world in which they function. They are open to new information and at the same time willing to check and possibly to modify various aspects of their identity under the influence of feedback information inconsistent with their belief.
2. Normative processing orientation is the case in people who largely adopt the expectations, values, and role models from their significant others. Their main purpose in gathering information is to protect their own views on life – shaped through foreclosure – and to defend themselves against information diverging from their fundamental values and beliefs. They exhibit low tolerance to ambivalent and unclear or uncertain information. Having a strong need to preserve the identity structure they possess, these individuals are cognitively closed.
3. Diffuse-avoidant processing orientation is characterised by postponing and putting off the handling of problems until later. It is marked by visible reluctance to confront problems and to cope with unpleasant decision situations, personal problems, or identity conflicts. If postponement is long enough, behaviour begins to be guided mainly by social expectations or requirements and the predicted (visualised)

⁵ Apart from the three identity styles, Berzonsky also included the measurement of commitment in his questionnaire – according to him, commitment gives the individual a sense of purpose and direction of activity (cf. the description of all four dimensions in: Senejko, 2010).

⁶ The description of cognitive orientations / identity styles is based on papers by Alicja Senejko (2010), co-author of the Polish adaptation of ISI (*Identity Style Inventory*), and Jan Ciecuch (2010).

consequences of a given behaviour. Diffuse-avoidant orientation may be said to work like a radar, since the ways of behaving it triggers off are mostly short-term and temporarily conformist activities, not conducive to stable transformations of identity structure.

In one of his first publications, devoted to the style of processing identity problems, Michael D. Berzonsky (1989) attributed qualitatively different cognitive orientations to individuals with different identity statuses according to James E. Marcia's (1966) classification. He believed that people with a strong tendency to explore – namely, with moratorium or achievement statuses – exhibited a strong informational orientation, that people with identity foreclosure typically had a normative orientation, and that individuals with unformed identity were characterised by diffuse-avoidant orientation. Berzonsky (1989) wrote:

Self-explorers, Moratoriums and Achievers, are *information oriented* [emphasis by MB]; they actively seek out, elaborate, and evaluate relevant [from the point of view of their plans – AB] information before making decisions and committing themselves. Foreclosures are more *norm oriented*. They focus on the normative expectations held for them by significant referent others, parental figures being an example. Uncommitted Diffusions tend to delay and procrastinate until the hedonic cues in the immediate situation dictate a course of behavior. Their *diffuse orientation* involves attempts to avoid confronting problems [and delay making decisions – AB] as long as possible... (p. 269).

In his study, however, Berzonsky (1989) obtained an incoherent picture of correlation between identity status and identity style. For diffuse-avoidant style and identity diffusion status, the correlation was $r = .62, p < .01$; for normative style and foreclosure status, it was $r = .47, p < .01$; for informational style and moratorium status, the correlation was not significant: $r = .06, p > .05$; finally, for informational style and achievement status it was low: $r = .25, p < .05$. The last two results were not consistent with the expectation that individuals with strong exploration (both statuses classified as “high” – namely, moratorium and achievement – cf. meta-analyses mentioned by Martinnussen and Kröger, 2013) would exhibit similarly strong informational orientation. However, with the level of commitment controlled for, a low but significant correlation was found between informational style and moratorium status: $r = .34, p < .01$.

In a subsequent study, Michael D. Berzonsky and Greg J. Neimeyer (1994) put forward and tested a hypothesis postulating the mediating role of commitment in the relationship between cognitive orientation and the type of identity status. They conducted their research on a large sample of students attending introductory psychology classes ($n = 560$; mean age $M = 19$) in order to extract “pure” types of identity (with scores at least one standard deviation above the mean on only one identity status). Out of the 172 subjects identified in this way, 148 (59% women) agreed to take part in further research; 25% of this group

were individuals with the status of identity diffusion, 19% had the moratorium status, further 19% were subjects with the foreclosure status, and as many as 37% exhibited the achievement status. The study showed, as expected, that individuals with different statuses differed in identity styles, but it also revealed strong informational orientation in subjects with the moratorium status as well as weaker informational and stronger normative orientation in subjects with formed types of identity.

Interesting information is provided by studies investigating the relations between the style of processing identity information and authoritarianism. Bart Duriez and Bart Soenens (2006) analysed the relations between authoritarianism (measured by means of RWA) and identity styles in the context of the Big Five personality traits. The participants in their study were first-year psychology students, aged 18 to 24 ($n = 328$, mean age $M = 18$ years, 80% women). The results showed that openness to experience correlated negatively with right-wing authoritarianism ($r = -.33$, $R^2 = 11\%$), social dominance orientation ($r = -.24$, $R^2 = 6\%$), as well as normative ($r = -.18$, $R^2 = 3\%$) and diffuse-avoidant styles ($r = -.20$, $R^2 = 4\%$), and positively with informational style ($r = .46$, $R^2 = 21\%$). Analyses using structural equations confirmed the authors' predictions that the styles of processing identity problems act as a mediator between the investigated personality traits and the level of authoritarianism, social dominance orientation, and – less markedly – racial prejudice. Numerous studies cited by Duriez and Soenens show that individuals with the statuses of identity moratorium and identity achievement tend to use an informational style much more often than others, people with identity foreclosure tend to use a normative style, and those with identity diffusion most often exhibit a diffuse-avoidant style. The first of these groups, being more open to experience, will exhibit a lower level of authoritarianism than the others.

Marta Miklikowska (2012) conducted similar research in an attempt to identify the psychological determinants of preference for democratic values. The participants in her study were young people aged 16-17 ($n = 1341$; 56% women). The analysis of the results revealed that the variables most strongly associated with support for democratic values were the following: empathy (positively: $r = .43$, $R^2 = 18\%$) and the level of right-wing authoritarianism (negatively: $r = -.41$, $R^2 = 17\%$), followed by normative identity style (negatively: $r = -.37$, $R^2 = 14\%$), openness to experience (positively: $r = .31$, $R^2 = 10\%$), and – to a small degree, though significantly positively – interpersonal trust ($r = .20$, $R^2 = 4\%$); self-esteem turned out not to be a significant factor. The author concludes that “as long as right-wing authoritarianism and psychological inflexibility are common, and empathy and interpersonal trust are low, democratic commitments are likely to be weak” (Miklikowska, 2012, p. 606).

The above conclusions are also supported by the results of a study on the relationship between styles of processing identity information and attitudes towards globalisation (Senejko & Łoś, 2016). The participants were 601 people (aggregate data) aged 16-26 ($M = 19$ years, 56% women). The sample was composed of school students, university students, and working people. Cluster analysis made it possible to distinguish five groups of individuals with different compositions of attitudes towards globalisation (fearful, critical, accepting), regardless of age and gender. The first group were participants with a strongly expressed accepting attitude towards globalisation, characterised by an informational style as well as weak normative and diffuse-avoidant styles. The critical attitude towards globalisation occurred in the form of two further clusters: (1) with two strong attitudes – critical and accepting, and with a strongly manifested informational style and a weakly manifested normative style (the second group); (2) with strong critical and fearful attitudes and normative style (the third group). What was characteristic for individuals from the next (fourth) group, with a strongly manifested fearful attitude towards globalisation, was the use of diffuse-avoidant and normative styles; informational style was the most weakly manifested in this group. Cluster analysis also revealed the fifth group, with a distanced attitude towards globalisation, characterised by the lowest level of diffuse-avoidant style compared to the remaining groups and by a moderate level of the other two styles.

The relationship between the processing of identity problems and well-being was investigated in the study reported by Georgios Vleioras and Harke A. Bosma (2005a). The participants in the study were 230 Greek students (81% women; mean age: $M = 20$). Detailed analyses yielded very interesting results. It turned out that the diffuse-avoidant style was a negative predictor of four out of six measured indicators of well-being (assessed according to the questionnaire authored by Carol Ryff), namely: sense of agency in the environment, positive relations with others, purpose in life, and personal development, while informational style and normative style predicted only one indicator – personal development: the higher the level of informational style and the lower the level of normative style, the stronger was the sense of personal development. None of the three styles was a predictor of self-acceptance or the sense of autonomy.

The authors conclude that, based on the obtained results, it is not possible to say that failure to cope with personal identity issues (high level of diffuse-avoidant style) is associated with lower well-being, or that coping with them in the form of the appearance of commitment and a high level of informational style is associated with higher well-being. The results show that the way the individual copes in the process of identity formation is not associated with his or her well-being, and therefore it is of no significance to the person's

well-being whether he or she is looking for answers to the burning questions independently or finds ready answers and conforms to external norms. Finding an answer and achieving some form of identity is more important than the manner of seeking them. Referring to the results of other authors' studies and analyses, the investigators point out that the factor initiating identity change is the experience of maladjustment – conflict between the current form of identity and the requirements of the environment – and the discomfort this involves. Perhaps, then, as Vleioras and Bosma (2005a) write,

... identity styles may be relevant to psychological well-being in cases where individuals are exposed to environments that challenge their [current forms of] identities (p. 407).

3.2. Emotional factors: shame, guilt, and pride

Of the analyses and studies conducted to date and devoted to the correlates of identity or to the determinants of its formation, few have addressed the role of emotional factors, and not always directly (e.g., Helson & Srivastava, 2001; Vleioras 2005; Vleioras & Bosma, 2005b; Vleioras, Van Geert, & Bosma, 2007) – and particularly few have addressed the role of self-conscious emotions in this process.

Tomasz Czub (2013) believes that what role in human functioning we attribute to self-conscious emotions, connected with self-appraisal, and how we see the role, for instance, of shame or guilt in identity formation depends on the model adopted – e.g., cognitive-attributive or evolutionary – and on approaching them as specific emotional states with an adaptive vs. maladaptive function (very strong or very weak sense of shame or guilt) or as a relatively stable personality disposition: a tendency to react with a sense of shame or guilt in certain situations.

According to Jessica L. Tracy and Richard W. Robins (2004), self-conscious emotions guide human activity by “encouraging” socially approved behaviours and discouraging socially undesirable ones. Thus, they activate striving to be “a good person” and to treat others well. This kind of behaviour gives a sense of pride, while opposite behaviour results in a sense of shame for oneself. Encouraging prosocial behaviours and giving a sense of social acceptance, self-conscious emotions promote respect for the reciprocity principle in interpersonal contacts. Their complexity lies mainly in the fact that they require the ability to construct stable cognitive self-representations, the ability to take another person's perspective, efficient social perception, and – finally – the ability to perceive discrepancies between one's own behaviour as well as the external evaluation of this behaviour and cognitive self-representations. This

means they are strongly “cognition-dependent” (Izard, Ackerman, & Schultz, 1999, as cited in: Tracy & Robins, 2004, p. 108), as opposed to basic emotions, and thereby strongly involved in the identity construction process.

Two important, if not actually basic, self-conscious emotions – shame and guilt – are defined by David Harder, an author of the PFQ-2 (*Personal Feelings Questionnaire*; Harder & Zalma, 1990), a questionnaire used in our research, as dysphoric affective states. A person experiencing shame may experience various negative feelings, sometimes difficult to bear, such as helplessness, fury, embarrassment, or humiliation, but may also have a sense of being in the centre of attention, which additionally increases the feeling of discomfort. The experience of shame is also associated with a sense of being psychologically rejected by stronger “others,” whom one believes to be ready to laugh at or mock him or her; a person experiencing a sense of guilt feels remorse and regrets what he or she has done (Lewis, 1971). Guilt is therefore associated with perceiving oneself as a person in control of the behaviour that led to the feeling of guilt.

Harder (1995) posits the existence of specific and relatively stable individual tendencies to experience shame and guilt, although everyone experiences both of these complex emotions from time to time. Individual differences in their intensity determine the higher or lower frequency of shame and guilt experiences in different people and are related to specific personality patterns.

According to Tomasz Czub (2013), it was not until the late 20th century that emotions clearly began to be approached in terms of significant behaviour regulation mechanisms, which also considerably influence the process of identity development. He believes it can be supposed that the relationship between shame and the course of identity development processes (particularly in the second cycle: commitment evaluation) is determined by the level of individual tendency to experience shame (shame as a personality disposition) or by the level of the currently experienced emotion of shame (shame as a state). However, Czub (2013; cf. Czub & Brzezińska, 2013) claims that this relationship may be neither linear nor direct, but mediated by the important competency of emotion regulation, developing from early childhood – including the regulation of complex self-conscious emotions (cf. Orth, Robins, & Soto, 2010).

3.3. Social factors: life orientation and type of social participation

As regards the role of subjective factors in the identity formation process, what we found particularly interesting was the little-known conception proposed by German psychologists and sociologists – Hans Merkens, Dagmar Bergs-Win-

kels, Heinz Reinders, and Petra Butz (Reinders, Bergs-Winkels, Butz, & Claßen, 2001; Reinders & Butz, 2001), popularised in Poland by Edyta Mianowska (2008). In this conception, adolescence is understood as a stage oriented either at the here and now or at the transition to the next stage of life; this orientation defines the type of life orientation: moratorium or transitive, giving direction to decisions and to the actions that stem from them.

The assumptions of this conception show striking resemblance to the acculturation model, authored by Canadian psychologist John Berry (Berry, Poortinga, Segall, & Dasen, 2002; cf. Boski, 2009), illustrating the relationship between the host culture and the native (home) culture arriving into its realm. As Paweł Boski (2009) writes:

Acculturation always takes place within the framework of a broader society, which has (or does not have) its own established practices and policy with regard to ethnic minorities and external migrants willing to settle in the country. At the same time the migrants themselves, or the representatives of the minority, have their own preferences that they wish to realise. Thus, there is the perspective of the majority, represented by the state, and the minority perspective (p. 525).

Berry (1997; 2001, cf. Figure 2 on p. 618) stressed that two equally important issues are invariably involved in migrants' contact with the host country. The first issue is the maintenance of the home group identity (the stability of intragroup characteristics), and the other is the relations of this group with its social environment (the dynamics of establishing and maintaining intergroup relations). The intersection of these two problems creates a cross-cultural space, in which the members of both groups – the old one and the new one – develop their mutual relations while at the same time defining their boundaries and strengthening their identity.

It is possible to treat the world of adults as a majority culture and the next generation of teenagers or emerging adults "arriving" into this world as a minority culture. The world of adults has its rules (in Boski's words, cited above: "its own established practices and policy"), while the world of adolescents and young adults has its own ("their own preferences that they wish to implement"). From this perspective, strong moratorium orientation in the adolescent generation can be treated as an expression of willingness to remain in the world of their own "adolescent" rules, while strong transitive orientation can be regarded as an expression of a desire to get to know and assimilate the rules of the world of adults.

Figure 1, based on Berry's original conception of acculturation, shows four different strategies used by the community of adults to deal with the new generation of young adults. These are: segregation of generations, building

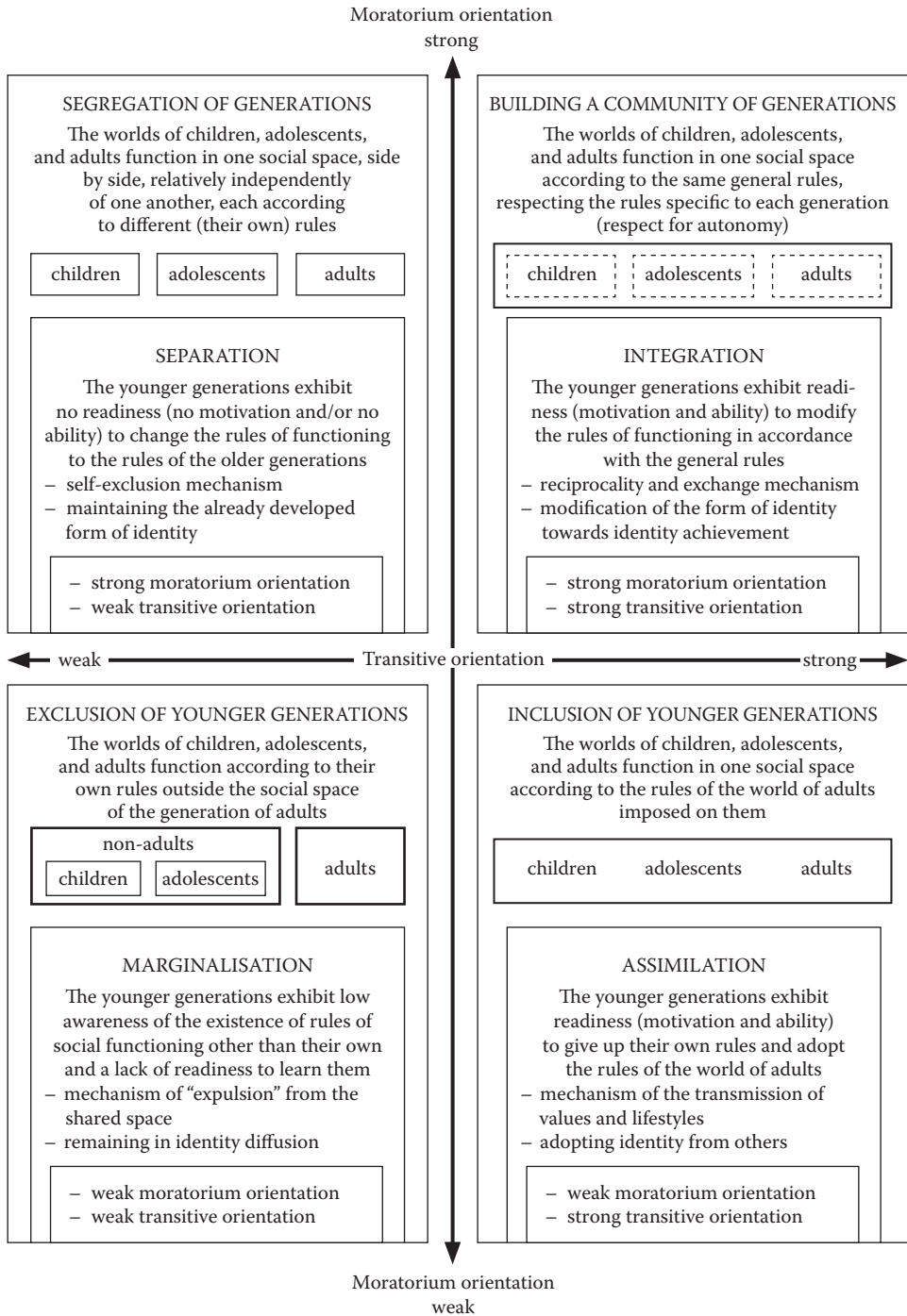


Figure 1. Types of life orientation, types of social participation, and intergenerational relations. Based on: Reinders & Butz, 2001; Berry *et al.*, 2002; Boski, 2009

a community of generations, exclusion of the younger generation, and inclusion of the younger generation. In response to these offers, younger generations build their strategies, respectively: separation, integration, marginalisation, and assimilation. These strategies are the product of the levels of the two life orientations (Reinders & Butz, 2001) and simultaneously express the attitude towards one's own age group (one's stage of life – adolescence) and towards the next age group – adults and the stage of adulthood.

Moratorium orientation (MO; Ger. gegenwartsorientierte Entaflattung) is visible in short-term activities, aimed at obtaining quick gratification. The very possibility of engaging in activity is a value, even if no gratifications result from it in the future (e.g., in the form of new abilities necessary in adult life) – a kind of functional pleasure. It seems that the concept of functional pleasure, referring to the child's experience in play and explaining the long-term character and the level of the child's engagement, could be fully related to moratorium life orientation – to young people's engagement in activities undertaken here and now, without a plan, without visualising the goal, and without reflection on the usefulness of the possible outcomes in the future (i.e., in adulthood).

By contrast, transitive orientation (TO; Ger. Transition), focused on “transition,” manifests itself in activities not necessarily resulting in any gratifications here and now, including a sense of pleasure, but undertaken in a long-term-perspective, with a view to their effects on, mainly benefits to, one's functioning in the future. In adolescence, these will be all kinds of activities amounting to “investment in oneself,” often involving considerable effort and resignation from other goals, whose effects will not be visible until adulthood, such as various forms of improving one's skills, obtaining certificates, or taking up various forms of work (traineeships, volunteer work).

Based on the levels of the two life orientations, it is possible to establish the type of social participation and the related path of development: (1) integration with the environment, respecting social rules but retaining the autonomy of one's own decisions; (2) assimilation of activity patterns dominant in the environment; (3) separation from the environment and satisfaction of needs according to one's own rules; (4) marginalisation, which means being “outside” the environment – outside its mainstream (cf. Figure 1).

The integration path is the path of individuals who are focused both on the present (strong moratorium orientation) and on the future (strong transitive orientation). They successfully accomplish the current developmental tasks expected of them and effectively strive to gain education within the framework of traditional educational institutions, but they are also open to various socially established patterns of the course of life. Moreover, they do not feel limited in

developing their abilities by other people's expectations and demands or by social control in their environment.

The path of assimilation (Reinders & Butz, 2001) is the path of individuals who strive to achieve a particular goal in their development towards adulthood, relying above all on the lifestyle and patterns provided by the environment or adopted from their significant others. They neither seek nor create their own paths of development; their beliefs and the actions stemming from these beliefs are an outcome of the internalisation of socially available models of life, often available from their closest others (parents, neighbours, and teachers). They effectively accomplish the developmental tasks of adolescence in an on-time manner and in a way typical of their reference age group⁷ (Settersten, 2004; Kokko, Pulkkinen, & Mesiäinen, 2009; Brzezińska & Kaczan, 2010). Even if they are aware of various alternative options of activity in their environment, they perceive them as not very attractive. They exhibit weak moratorium orientation and strong transitive orientation.

The path of segregation (Reinders & Butz, 2001) is the path of young people who are not fully realising their current developmental tasks, typical for their stage of life and supposed to prepare them for adulthood, since they are unwilling or unable to accept the external requirements and social expectations associated with "becoming an adult." Nevertheless, they have sufficient personal resources and sufficient resources in their social environment (in their niche – family, neighbours, friends and acquaintances, including Internet friends) and are able to use them to develop their own ways of satisfying their current needs, alternative to the ones expected by or dominant in the environment. The possibilities of development thus created often do not conform to the socially established patterns of the course of life "towards adulthood," and so they may find an outlet in subcultures and in defiance of the commonly recognised norms and values. Individuals following this path exhibit strong moratorium orientation and weak transitive orientation.

The marginalisation path (Reinders & Butz, 2001) is the path of young people who are passive and show neither interest in the future nor commitment to giving shape to their own life. They usually perceive the accomplishment of developmental tasks constituting preparation for adulthood as very difficult and often reject them. At the same time, they have neither sufficient resources in their social environment nor sufficient personal resources to foster engagement in activities providing personal satisfaction here and now. As a result, they are a high risk group for social marginalisation and, in certain special external

⁷ Cf. the conception of developmental timetable, presented in the 1985 study by Gunhild Hagestad and Bernice L. Neugarten (cited in: Settersten, 2004).

circumstances, even for social exclusion in adulthood. They exhibit both weak moratorium orientation and weak transitive orientation.

Based on this conception (Reinders, Bergs-Winkels, Butz, & Claßen, 2001; Reinders & Butz, 2001), Edyta Mianowska (2008) conducted a study among lower secondary (middle) school students ($n = 473$), devoted to the role of individual, peer, family, and school resources in the development of specific type of social participation. In her sample of lower secondary school students (in the first, early phase of adolescence), 31% of subjects exhibited the integrative type of social participation, 15% had the assimilative type, 21% represented the segregative (separative) type, and 33% exhibited the marginalisational type (in Mianowska's terminology – indifferent type).

A study conducted by Małgorzata Rękosiewicz (2013b), also on a sample of lower secondary school students ($n = 509$), yielded a very different distribution of the frequency of participation types: integration – 11% of students; assimilation – 26%; segregation – 39%; marginalisation – 23%. A very probable explanation of these large discrepancies may be the fact that the two authors used not only different methods of measuring the levels of both life orientations but also a different statistical method of identifying the type of social participation.

As regards the instrument, in Mianowska's study it was one question with five categories of answers to rate for moratorium orientation (reliability: Cronbach's $\alpha = .70$) and one question with four categories of answers to rate for transitive orientation ($\alpha = .69$). In the study by Rękosiewicz, the measure was a questionnaire consisting of 10 items with five answers to choose from for each orientation type (for the description of the procedure of developing the questionnaire, see: Rękosiewicz, 2013a) with properties tested in prepilot and pilot studies (reliability in six age groups for moratorium orientation: .80 to .84; for transitive orientation: .82 to .86).

As regards the method of determining the type of participation, Mianowska used the values of arithmetic mean – for the total sample – on both the first and the second dimensions as criterial points for assessing the low/high level of each orientation. Next, each participant was classified into one of four categories: (1) MO- TO-; (2) MO- TO+; (3) MO+ TO-; (4) MO+ TO+. Rękosiewicz used cluster analysis (*k*-means clustering) to distinguish subgroups according to the configuration of scores on the two dimensions. In most of her studies (Rękosiewicz, 2013b, 2016a), she also obtained four subgroups corresponding to the four types of participation, but in two studies the integrative type did not occur – in general upper secondary school students and in university students (Rękosiewicz, 2016b).

The distributions of the frequency of the four types of social participation in the analyses performed by Rękosiewicz (2013b; cf. results for age groups

older than lower secondary school students) and in a study in which the compared groups were individuals with mild intellectual disability and nondisabled subjects – in the second phase of adolescence and in emerging adulthood (Rękosiewicz, 2012) – show that the results obtained in a questionnaire-based study of life orientations are not only much more reliable but, more importantly, much more valid when the developmental patterns of early and late adolescence and emerging adulthood are taken into account and when the type of education (general or vocational) is considered.

Studies by Rękosiewicz (2013b, 2016a, 2016b) show that, in all the age groups she compared (except basic vocational school students – 22%), the integrative type occurred the least often (lower secondary school students and university students – 11%; technical and general upper secondary school students – 13%; post-secondary school students – 15%). The segregative/separative type with strong moratorium orientation was found mainly in lower secondary school students (39%) and university students (41%). These two groups were similar also in terms of the frequency of the assimilative type, characterised by strong future orientation (lower secondary school – 26%; university students – 25%). The assimilative type occurred comparably often and dominated in general upper secondary school students (34%), technical upper secondary school students (38%), basic vocational school students (32%), and post-secondary school students (33%). Finally, marginalisation (weak moratorium orientation and weak transitive orientation) occurred the least often in individuals preparing to take up work directly after finishing school – namely, in basic vocational school students (18%) and in post-secondary school students (17%).

The selected results cited here not only illustrate the high internal diversity of the samples of students in the first and second phases of adolescence as well as post-secondary school and university students in terms of the resources that determined their readiness for entry into adulthood. These results clearly show the link of these psychological characteristics with the quality of offers in the environment of their development and with the path of education – general (comprehensive) or vocational.

4. Concluding Remarks

The analyses presented here concerned various factors related to entry into adulthood: educational activity, taking on social roles, the sense of being an adult, and the sense of on-time accomplishment of developmental tasks. Our earlier research (cf. Brzezińska, Kaczan, Piotrowski, & Rękosiewicz, 2011)

revealed that age was not the main factor determining successive developmental stages. A more important one was the individual's psychosocial situation, defined on the one hand by his or her social, educational, and occupational status as well as by the kinds of activities engaged in and roles taken on, and on the other hand by psychological maturity, connected with the level of identity formation (maturity) and the system of beliefs concerning the course of his or her life and the accomplishment of developmental tasks.

"Being on time," "on-time accomplishment of developmental tasks" – what does this mean for an individual? What significance do a person's beliefs regarding these have for his or her further development? On-time performance of developmental tasks (i.e., at a time in life similar to others) ensures stronger support from peers and the entire social environment. It can be said to normalise the course of the individual's life, making him or her similar to others in this respect. It affords the possibility of comparing oneself with others, which not only performs an informational and formative function (at what stage am I? what have I succeeded or failed in?) but also has protective significance for self-esteem, because it allows for downward comparisons (e.g., I am not doing that bad; I have accomplished this, while others have it still ahead of them) that do not fundamentally threaten self-esteem.

By contrast, in the opposite situation, when the individual is performing developmental tasks off-time or feels that this is the case, he or she must invest more internal resources to cope with them due to weaker support from others. The person finds it more difficult to estimate the risk involved in the performance of a given task, being unable to compare himself or herself with peers, and does not know if the achievement of the goals set will bring the desired results or not. Both beliefs – i.e., the sense of on-time or off-time accomplishment of developmental tasks – may affect the scope of exploration, the scope of commitments, and the level of engagement in their implementation. Any difficulties – objective and subjective – in the performance of developmental tasks result not only in a smaller number of tasks undertaken and accomplished in the future but also in the contents of beliefs concerning the timing of their accomplishment.

Analysing the causes of prolonged adolescence – or, more precisely, the causes of delayed entry into the next stage of development: adulthood – it is necessary to consider various factors connected both with the individual's immediate environment and with his or her competencies: above all, with readiness for change. Family structure, including the number and age of children, intergenerational relations, views concerning adulthood, and family resources, significantly influence adolescents' attitude towards making commitments, taking responsibility for decisions, and making long-term future plans. On the

other hand, the educational and peer environment as well as the increasing influence of broadly understood media (particularly the Internet, including social media) shape young people's attitude towards life and, consequently, also to the adoption or non-adoption of new life roles.

Chapter 4

DETERMINANTS OF THE DIMENSIONS OF IDENTITY DEVELOPMENT IN UPPER SECONDARY SCHOOL STUDENTS: RESEARCH PLAN



1. Introduction

The research¹ whose selected results this study presents was conducted in 2012-2015. It was preceded by a pilot study,² conducted in the first half of 2012. The participants in the main study were upper secondary school students (i.e., individuals in late adolescence), whereas in the pilot study we also tested younger people, in an earlier phase of adolescence, as well as people in emerging and early adulthood.

2. Research Plan

2.1. Pilot study

The total sample in the pilot study consisted of 2012 people (women constituted 57.5%). The participants were learners belonging to three age groups:

- aged 12-15, in early adolescence: lower secondary (middle) school students ($n = 509$, 55% girls);

¹ The research was financed by the National Science Centre (NCN) in Cracow, Poland, as part of NCN OPUS 2 project no. 2011/03/B/HS6/01884 for 2012-2017, titled *Mechanisms of Identity Formation During the Transition From Adolescence to Adulthood: The Regulatory Role of Self-Conscious Emotions* (principal investigator: Anna I. Brzezińska; co-investigator: Tomasz Czub).

² The research was financed by statutory research funds of the Institute of Psychology, Adam Mickiewicz University in Poznań (principal investigator: Anna I. Brzezińska).

- aged 16-19, in late adolescence: students of schools offering general education – namely, general upper secondary schools ($n = 360$, 56% women) – and students of schools offering vocational education, namely: basic vocational schools and technical upper secondary schools ($n = 215$, 41% women);
- aged 20-35, in emerging and early adulthood: post-secondary school students as well as undergraduate and graduate students ($n = 928$, 78% women).

The three samples were not representative of their populations – i.e., early adolescence, late adolescence, and emerging and early adulthood – since the sampling was purposive (the criterion being age) and the participants were volunteers. Each person consented to take part in the study, and in the case of underage students consent had to be given also by parents. The study was conducted on a group basis during one meeting.³

The first aim of the pilot study was to collect data for testing the *Social Participation Questionnaire* (SPQ), constructed in Polish by the project's research team based on German scholars' conception (cf. Merkens & Butz, 2000; Reinders, 2006; Reinders, Bergs-Winkels, Butz, & Claßen, 2001). There were two versions of this questionnaire: full and short, each for two age groups, namely: SPQ1 for participants aged 13-18 and SPQ2 for participants aged 19-30 (a description and psychometric parameters of the SPQ, known in Polish as KPS, can be found in Rękosiewicz, 2013a). The second aim was to test the Polish adaptation of the *Dimensions of Identity Development Scale* (DIDS/PL; Brzezińska & Piotrowski, 2009, 2010).⁴ The third aim was to test the quality of the Polish translation and psychometric adaptation of two questionnaires: *Difficulties in Emotion Regulation Scale* (DERS/PL) and *Personal Feelings Questionnaire* (PFQ-2/PL).⁵

³ The pilot study was conducted by properly trained fourth- and fifth-year psychology students. They used some of the data collected in the course of this study in their MA theses written in 2013 and 2014 at the Institute of Psychology of Adam Mickiewicz University in Poznań (supervisor: Anna I. Brzezińska; consultant: Tomasz Czub).

⁴ This scale had been developed as part of the research project no. WND-POKL-01.03.06-00-041/08, titled *All-Poland Research on the Situation, Needs, and Opportunities of Disabled People* (principal investigator: Anna I. Brzezińska; head of the module devoted to adolescents and young adults with functional limitations: Konrad Piotrowski). The project was realised in 2008-2010 at the University of Social Sciences and Humanities (SWPS) in Warsaw and financed by the European Social Fund, under Priority 1: Active labour market and professional and social inclusion policy, and under Measure 1.4: Vocational and social integration of the disabled.

⁵ The results of analyses performed on the data collected in the pilot study and partly used in MA theses by the students conducting it have been published in articles included in a thematic issue of *Polish Psychological Bulletin* in 2013 (vol. 44, issue 3), edited by

2.2. Main study

2.2.1. RESEARCH DESIGN

The main study was conducted in 2012-2015 according to a combined plan, providing an opportunity to perform several types of comparisons: (1) cross-sectional (transversal) and time-sequential, (2) time-lag and cohort-sequential, as well as (3) longitudinal and cross-sequential (see: Bee, 2004).

The participants were students of various types of upper secondary schools in Poznań, Poland. In all schools functioning as part of vocational school complexes (VSC), we performed six measurements over a period of three years, in six consecutive semesters; in the case of general upper secondary schools (GEN) that were not part of vocational school complexes, we performed four measurements in four consecutive semesters.

Table 1 presents the research plan and the types of simple and complex comparisons that it made possible:

- **cross-sectional comparisons** (and, based on them, complex time-sequential comparisons – cf. results in Chapter 5) (horizontal arrows): they concerned the scores of students of all grades in all the investigated types of schools, analysed separately in each of the six stages of the main study; the aim of these comparisons was to determine the patterns of similarities and differences in the profiles of scores between the compared groups of students and to identify the set of factors differentiating these profiles (type of upper secondary school, gender, age/grade, mother's and father's education, and other demographic variables);
- **time-lag comparisons** (and, based on them, complex cohort-sequential comparisons – cf. results in Chapter 6) (dark grey fields and the diagonal arrow): they were comparisons of first-grade students from consecutive school years, and it was possible to make them twice: for scores from the measurement performed in the first semester (at the beginning of the first grade; a comparison of the scores of cohorts tested in Stages 1, 3, and 5) and in the second semester (near the completion of the first grade; a comparison of the scores of cohorts tested in Stages 2, 4, and 6) of each school year; the purpose of these comparisons was to determine whether the profiles of scores and the kinds of change in them over a period of one year, found in three different cohorts of students at the same age but tested at different times, were similar or dissimilar – that

Anna I. Brzezińska and titled *Becoming an Adult – Contexts of Identity Development*, as well as in papers by Czub & Brzezińska (2013), Brzezińska, Czub, & Piotrowski (2014), and Rękosiewicz (2014).

- is, whether a given pattern (profile) changed depending on or independently of contextual factors (measurement time and its interaction with demographic variables);
- **longitudinal comparisons** (and, based on them, complex cross-sequential comparisons – cf. results in Chapter 7) (vertical arrows): planned with a minimum of four measurements in the same group, namely (a) a comparison of scores from six measurements for students of vocational school complexes, (b) a comparison of scores from four measurements for students of general upper secondary schools that were not part of vocational school complexes, and (c) a comparison of scores from four measurements for students of all types of upper secondary schools; the purpose of cross-sequential comparisons was to identify and analyse trends in developmental changes (progressive and regressive) or to detect a lack of change (stagnation) as well as to assess the similarity of these trends across the compared cohorts, groups, and subgroups of students.

Table 1. Main Study Design: The Plan of Cross-Sectional, Time-Lag, and Longitudinal Comparisons

Measurement no. and time	Measurement 1 Autumn 2012			Measurement 2 Spring 2013			Measurement 3 Autumn 2013			Measurement 4 Spring 2014			Measurement 5 Autumn 2014			Measurement 6 Spring 2015			
	Grade	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Autumn 2012	█	█	█																
Spring 2013				█	█	█													
Autumn 2013							█	█	█										
Spring 2014										█	█	█							
Autumn 2014													█	█	█				
Spring 2015																█	█	█	

2.2.2. MODIFICATION OF INSTRUMENTS AFTER THE FIRST STAGE OF RESEARCH

In the first (autumn/winter) semester of 2012/2013, we conducted the first measurement that was part of the main study. The participants were students

Table 2. The Reliability and Quality of the Factor Structure of Questionnaire Measures

Instrument name and scales	Cronbach's α	Results of confirmatory factor analysis
<i>DIDS/PL – Dimensions of Identity Development Scale</i>		
<i>Note.</i> Due to low discriminatory power (correlation with the scale score < .45), one item (no. 24) was removed from the Ruminative Exploration scale.		
1. Exploration in Breadth	.72	
2. Exploration in Depth	.64	$\chi^2 (df = 243, n = 1251) = 1856$ AGFI = .86, CFI = .89 RMSEA = .07
3. Ruminative Exploration	.83	
4. Commitment Making	.90	
5. Identification With Commitment	.82	
<i>ISI-4/PL – Identity Style Inventory – experimental version</i>		
<i>Note.</i> Due to low discriminatory power (correlation with the scale score < .35), three items were removed: item 6 (Commitment), item 15 (Normative Style), item 16 (<i>Diffuse-Avoidant Style</i>)		
1. Diffuse-Avoidant Style	.59	
2. Normative Style	.64	
3. Informational Style	.73	
<i>PFQ-2/PL – Personal Feelings Questionnaire</i>		
1. Shame	.87	$\chi^2 (df = 64, n = 1238) = 344.97$ AGFI = .94, CFI = .96 RMSEA = .06
2. Guilt	.82	
<i>DERS/PL – Difficulties in Emotion Regulation Scale</i>		
1. Lack of Emotional Awareness	.65	
2. Lack of Emotional Clarity	.67	
3. Difficulties Engaging in Goal-Directed Behaviour	.88	$\chi^2 (df = 215, n = 1250) = 1060.15$ AGFI = .91, CFI = .94 RMSEA = .06
4. Impulse Control Difficulties	.92	
5. Limited Access to Emotion Regulation Strategies	.87	
6. Nonacceptance of Emotional Responses	.79	
<i>SPQ1-S – Social Participation Questionnaire – short version</i>		
<i>Note.</i> We removed five items due to their negative effect on the factor structure: item 1 (Transitive Orientation), item 2 (Moratorium Orientation), item 16 – (Moratorium Orientation), item 17 (Transitive Orientation), and item 19 (Moratorium Orientation)		
1. Moratorium Orientation	.81	$\chi^2 (df = 89, n = 1246) = 783.88$ AGFI = .87, CFI = .90 RMSEA = .08
2. Transitive Orientation	.85	

($n = 1033$, 50.9% women) of six vocational school complexes in Poznań, attending basic vocational schools (Grades 1–3), technical upper secondary schools (Grades 1–4), and specialised upper secondary schools or general upper secondary schools with specialised classes (Grades 1–3).

The first step in the analysis of results was to test the quality of the factor structure of the five questionnaires administered in this stage (DIDS/PL, ISI-4/PL, PFQ-2/PL, DERS/PL, and SPQ1-S – see section 4 for a description of the instruments) in order to introduce changes aimed at increasing their psychometric value after the pilot study.

Table 2 presents goodness-of-fit indices (χ^2 , AGFI, CFI, RMSEA) and Cronbach's α reliability coefficients for the final version of each instrument in the total sample of students, together with information about the items removed as lowering the psychometric value of a given measure. The values obtained after the changes had been made – both goodness-of-fit indices and reliability coefficients – were acceptable.

3. Research Organisation

In order to respect the principle of students' voluntary participation, the research was organised in such a way that it was conducted on designated days in each semester and that only those students took part in it who were present at school at the time and consented to complete the set of questionnaires. This means that in the subsequent stages of the research we did not try to contact the previously tested students and did not invite them to be tested on a day other than the one designated for everyone else. Such actions would have violated the principle of confidentiality. However, as a result of this procedure, the sample of students underwent many fluctuations and the group examined four or six times – for the final longitudinal comparisons – was rather small.

Cooperation agreements had been signed with all the schools in which we conducted research. The agreements were concluded between the principal of each school and the Vice-Chancellor of Adam Mickiewicz University (AMU) in Poznań. They concerned maintaining contact with the administration of each school in order to discuss current organisational and ethical issues connected with the project; conducting research only with the consent of the parents of underage students and with the students' consent; making the research results available upon request to the school administration (without compromising the students' anonymity), only in the form of overall reports from each stage of the study; and preparing a training for form teachers and school counsellors

or psychologists (if they reported a need for such training), making it possible to use the obtained results for improving the plans and forms of educational work with students.

The person formally representing AMU Institute of Psychology and organising the research in a given school on a given day first obtained consent to conduct the research from the principal and the teachers whose lessons were scheduled for that day. Written consent was then obtained from the parents of underage students. Next, students were introduced to the aim of the research and invited to take part in it on a voluntary basis. After obtaining the students' consent, the investigators commenced the research by giving them questionnaire booklets (with the same contents but different in grammatical form for girls and for boys, marked with different colours). The students consent was elicited before each of the consecutive stages of the study, whereas the parents of underage students were requested only once to give consent to their child's participation in all six stages.

To ensure anonymity and at the same time to be able to collect answer sheets from the individuals who consented to take part in the consecutive stages (measurements), we developed a system of coding the sheets and marking the envelopes that students put the completed sheets into. The measurements were held on a group basis, in classrooms, during one 45-minute lesson. They were conducted by 4th- and 5th-year psychology students and graduates, properly trained beforehand.⁶

After the completion of each stage of research and before entering the results in the database, we examined the questionnaires and eliminated those in which some fields had not been completed in order to analyse them separately. They were a small percentage of questionnaires in each stage.

4. Participants

4.1. The sampling and number of students

The participants were students of Poznań's upper secondary schools – six vocational school complexes and three general upper secondary schools. We decided to include general upper secondary school students in the study when

⁶ Some of the results obtained in the research were used in the investigators' MA theses, written in 2014, 2015, and 2016 at the Institute of Psychology of Adam Mickiewicz University in Poznań (supervisor: Anna I. Brzezińska; consultant: Tomasz Czub). Some of the results were published in six chapters in a monograph edited by Anna I. Brzezińska and Weronika Syska (2016).

the educational path of specialised upper secondary schools or general ones with specialised classes in vocational school complexes began to be closed or replaced with upper secondary schools with a general curriculum.⁷ Students of general upper secondary schools that were not part of vocational school complexes were included in the study starting from the third stage (i.e., from school year 2013/2014; Measurement 1 – autumn 2013) – cf. Table 3.

Table 3. The Stages of Research and the Number of Participants in Each Stage

School year	School year					
	2012/2013		2013/2014		2014/2015	
Spring 2012	Autumn 2012	Spring 2013	Autumn 2013	Spring 2014	Autumn 2014	Spring 2015
Pilot study	Main study					
	Measure- ment 1	Measure- ment 2	Measure- ment 3	Measure- ment 4	Measure- ment 5	Measure- ment 6
<i>n</i> = 2012	<i>n</i> = 1033	<i>n</i> = 1452	<i>n</i> = 2410	<i>n</i> = 2088	<i>n</i> = 2414	<i>n</i> = 2017
57.5% women	50.9% W	53.0% W	54.2% W	54.0% W	55.2% W	56.9% W
Lower secondary (middle) schools, upper secondary schools, post-secondary schools, undergraduate and graduate studies	Six vocational school complexes [VSC], comprising basic vocational schools [BVS], technical upper secondary schools [TEC], specialised or general upper secondary schools [SGC]					
	Three general upper secondary schools [GEN]					

Each time, the participants were all the students present at school on the day designated for the research who consented to take part in it. As a result, the sample always consisted of students from Grades 1, 2, and 3 (as well as Grade 4 in the case of technical upper secondary schools), regardless of whether or not they had participated in any of the previous stages. Consequently, in each stage except the first one the sample consisted of participants tested for the first time and participants already tested before.

A significant confounding factor in the research was the considerable fluctuation of students, particularly in basic vocational schools and technical upper secondary schools, stemming mainly from the fact that they had to attend practical vocational classes and work as trainees outside school, but also from the fact that some of them left school during the school year or played truant.

⁷ In 2011, a law was passed that introduced major changes to the structure of upper secondary education (Dz.U. [*Polish Journal of Laws*] no. 205, item 1206). One of the directions of these changes was the liquidation of specialised upper secondary schools. Cf. The Act of 19 August 2011 amending the Act on the system of education and certain related acts (Dz.U. no. 205, item 1206).

4.2. The number of students in cross-sectional and time-sequential comparisons

Table 4 shows that, in each stage, the groups for cross-sectional comparisons (see data, presented in separate columns for each of the six measurements) were very large and similarly diverse in terms of school type and the number of students of different grades, from the first grade to the final grade in a given school type. The percentage of women ranged from 50.9% in Stage 1 to 56.9% in Stage 6. This percentage was similar in different types of schools.

Table 4. The Number of Students Participating in Stages 1 to 6 of the Main Study (Cross-Sectional Comparisons)

Measurement time / no.	Autumn 2012		Spring 2013		Autumn 2013		Spring 2014		Autumn 2014		Spring 2015		
	Measurement 1		Measurement 2		Measurement 3		Measurement 4		Measurement 5		Measurement 6		
Grade / school	<i>n</i>	% W	<i>n</i>	% W	<i>n</i>	% W	<i>n</i>	% W	<i>n</i>	% W	<i>n</i>	% W	
Grade 1	BVS	72	88.9	82	90.0	120	81.7	108	77.8	92	87.0	72	84.7
	TEC	189	36.0	235	40.0	370	34.1	370	36.2	366	36.1	297	37.0
	SGC	49	57.4	91	49.5	105	45.7	96	53.1	126	35.7	69	55.1
	GEN					301	59.1	198	58.6	231	68.8	182	58.2
Total	310		408		896		772		815		620		
Grade 2	BVS	98	78.6	123	70.7	89	77.5	82	76.8	108	83.3	101	80.2
	TEC	168	31.9	163	44.8	223	39.0	201	39.3	316	38.3	295	38.3
	SGC	88	67.0	137	59.1	86	54.7	88	54.5	93	48.4	86	50.0
	GEN					221	54.8	173	60.1	296	61.1	231	60.6
Total	354		423		619		544		813		713		
Grade 3	BVS	115	69.6	132	73.5	88	76.1	73	71.2	74	79.7	74	82.4
	TEC	124	29.8	152	23.7	191	35.1	193	36.3	201	38.3	177	36.7
	SGC	128	50.0	140	52.1	131	60.3	138	60.9	110	56.4	82	56.1
	GEN					323	58.8	229	57.6	215	60.5	200	62.8
Total	367		424		733		633		600		533		
Grade 4	TEC	2	-	197	26.4	162	27.3	139	26.1	186	24.2	151	37.7
Total <i>n</i>	1033	50.9	1452	53.0	2410	54.2	2088	54.5	2414	55.2	2017	56.9	

The amount of data made it possible to establish the patterns of similarities and differences in the profiles of scores: (1) for students of different types of schools and for different levels of education (grades) in vocational school complexes in each of the six measurements (nos. 1 to 6), (2) for general upper secondary school students and for different levels of education (grades) in four

measurements (nos. 3 to 6), and (3) for students of vocational school complexes as compared to students of general upper secondary schools and for different levels of education (grades) in four measurements (nos. 3 to 6).

4.3. The number of students in time-lag and cohort-sequential comparisons

The groups for time-lag comparisons were also large (see Table 5). The total number of first-grade students tested in the first semester of consecutive school years – 2012/2013, 2013/2014, and 2014/2015 – was 310 (no GEN), 896, and 815, respectively. In the second semester, the corresponding figures were as follows: 408 (no GEN), 772, and 620. The number of students who were tested twice and whose scores were analysed (see results in Chapter 6) was 234 (no GEN), 624, and 535 for the consecutive school years, respectively.

Table 5. The Number of First-Grade Students in the Main Study in Three Consecutive School Years (Time-Lag Comparisons)

Time	Autumn 2012		Spring 2013		Autumn 2013		Spring 2014		Autumn 2014		Spring 2015	
	Semester 1		Semester 2		Semester 1		Semester 2		Semester 1		Semester 2	
Measurement	Measurement 1		Measurement 2		Measurement 3 (1)		Measurement 4 (2)		Measurement 5 (1)		Measurement 6 (2)	
School	<i>n</i>	% W	<i>n</i>	% W	<i>n</i>	% W	<i>n</i>	% W	<i>n</i>	% W	<i>n</i>	% W
BVS	72	88.9	82	90.0								
TEC	189	36.0	235	40.0								
SGC	49	57.4	91	49.5								
GEN	GEN students were not tested											
Total	310		408									
BVS					120	81.7	108	77.8				
TEC					370	34.1	370	36.2				
SGC					105	45.7	96	53.1				
GEN					301	59.1	198	58.6				
Total					896		772					
BVS									92	87.0	72	84.7
TEC									366	36.1	297	37.0
SGC									126	35.7	69	55.1
GEN									231	68.8	182	58.2
Total									815		620	

Note. For each first grade in a given school year, we performed two measurements, indicated as (1) as (2).

The first kind of time-lag design was a comparison of scores obtained by students of different types of schools at the beginning of Grade 1 (“initial capital”), and the second kind was a comparison of scores obtained towards the end of Grade 1. It was also possible to perform longitudinal comparisons and, on their basis, to assess the extent to which the initial capital was either multiplied or squandered in order to capture the change that occurred over the year of study in Grade 1 in each type of school. This consisted in comparing the scores from Measurements 1 and 2 in the first group of first-grade students (2012/2013), the scores from Measurements 3 and 4 in the second group (2013/2014 – for them, these were Measurements 1 and 2), and the scores from Measurements 5 and 6 in the third group of first-grade students (2014/2015 – for them, these were Measurements 1 and 2).

As a result of such complex cohort-sequential comparisons, it was possible to establish in which type of school progressive or regressive change occurred over one school year and in which there was stagnation, and to determine whether or not this tendency was similar in subsequent years (cohorts) of students.

4.4. The number of students in longitudinal and cross-sequential comparisons

Table 6 shows that only a small sample was available for the main longitudinal comparison: namely, for the analysis of the trends of change (over the period of three years) in the first group – the group of students from vocational school complexes who commenced education in Grade 1 of basic vocational schools, technical upper secondary schools, and specialised upper secondary schools or ones with specialised classes in school year 2012/2013 (for these types of schools, they constituted 32%, 35%, and 39% of the initial sample tested in Measurement 1, respectively). The situation was similar in the case of general upper secondary school students who commenced the first grade (29% of the initial sample) or the second grade (34% of the initial sample) in school year 2013/2014 and were tested (in both cases) four times over the subsequent period of two years.

Longitudinal comparisons encompassing six measurements concerned only 109 students from vocational school complexes who had attended Grade 1 in school year 2012/2013 (23 from basic vocational schools, 67 from technical upper secondary schools, and 19 from specialised or general upper secondary schools). This was 35% of the initial sample of $n = 310$. Comparisons encompassing four measurements concerned 88 general upper secondary school

Table 6. The Number of Participants in Longitudinal Comparisons

Measurement time and no. School	Autumn 2012		Spring 2013		Autumn 2013		Spring 2014		Autumn 2014		Spring 2015		% of Measurement 1 (initial) sample
	1 – Grade 1		2 – Grade 1		3 – Grade 2		4 – Grade 2		5 – Grade 3		6 – Grade 3		
	<i>n</i>	% W	<i>n</i>	% W	<i>n</i>	% W	<i>n</i>	% W	<i>n</i>	% W	<i>n</i>	% W	
BVS (gr. 1-3)	72	88.9	62	87.3	46	84.8	34	85.7	27	88.0	23	86.4	32%
TEC (gr. 1-3)	189	36.0	142	39.7	109	41.3	83	39.8	65	39.4	67	38.5	35%
SGC (gr. 1-3)	49	57.4	42	59.5	33	60.6	28	59.3	25	57.7	19	57.9	39%
Total	310										109		35%
	Measurement no.				1 – gr. 1 (2)		2 – gr. 1 (2)		3 – gr. 2 (3)		4 – gr. 2 (3)		
GEN (gr. 1-2)					301	59.1	176	56.8	141	54.3	88	62.5	29%
GEN (gr. 2-3)					221	54.8	137	62.0	99	59.6	74	60.8	34%

students who had attended Grade 1 in school year 2013/2014 (29% of the initial sample of $n = 301$) and 74 general upper secondary school students who had attended Grade 2 in school year 2013/2014 (34% of the initial sample of $n = 221$).

4.5. Participants' gender and age (grade)

In each measurement, the proportion between the number of boys and girls was similar in the whole sample tested at a given time, though it was clearly different in the case of basic vocational schools (more girls) and technical upper secondary schools (more boys).

In each of the six vocational school complexes a similar proportion of students in Grades 1, 2, and 3 attended basic vocational school, technical upper secondary school, and specialised upper secondary school (or general one with specialised classes). Also, in each school complex the largest number of students attended technical upper secondary school. Detailed data are presented in Table 6.

The students' age varied only slightly ($\eta^2 = .01$, $F = 9.34$, $p < .001$) depending on the type of upper secondary school. The participants' age in general upper secondary schools ranged from 16 to 20 ($M = 17.51$, $sd = 0.90$), just like in specialised upper secondary schools functioning as part of vocational school complexes ($M = 17.63$, $sd = 0.97$). In technical upper secondary schools

the students were 16 to 21 years old ($M = 17.76$, $sd = 1.20$; this is because the sample included fourth-grade students), and in basic vocational schools their age also ranged from 16 to 21 ($M = 17.87$, $sd = 1.05$; grade repetition was more frequent than in other schools). Age diversity was higher in schools with vocational curricula than in those with general curricula (standard deviation being 0.90 for GEN, 0.97 for SGC, 1.20 for TEC, and 1.05 for BVS).

4.6. Parents' education level

Table 7 presents the education level of the mothers and fathers of students who began Grade 1 in consecutive years in different types of upper secondary schools – in vocational school complexes and in general upper secondary schools.

Table 7. The Education Level of the Parents of Students Beginning the First Grade of Upper Secondary School in School Years 2012/2013, 2013/2014, and 2013/2014

Cohort, measurement time / no. School / level of education	Cohort 1 sch. yr 2012/13, autumn		Cohort 2 sch. yr 2013/14, autumn		Cohort 3 sch. yr 2014/15, autumn	
	Measurement 1		Measurement 3 (1)		Measurement 5 (1)	
	<i>n</i>	% W	<i>n</i>	% W	<i>n</i>	% W
BVS	72	88.9	120	81.7	92	87.0
<i>Mother's education</i>	70	100	113	100	87	100
Primary	6	8.6	9	8.0	2	2.3
Vocational	40	57.1	58	51.3	52	59.8
Secondary	20	28.6	34	30.1	27	31.0
Higher	4	5.7	12	10.6	6	6.9
<i>Father's education</i>	68	100	117	100	81	100
Primary	3	4.4	9	8.4	1	1.2
Vocational	41	60.3	60	56.1	59	72.8
Secondary	20	29.4	30	28.0	18	22.2
Higher	4	5.9	8	7.5	3	3.7
TEC	189	36.0	370	34.1	366	36.1
<i>Mother's education</i>	183	100	349	100	358	100
Primary	4	2.2	13	3.7	11	3.1
Vocational	69	37.7	93	26.6	99	27.7
Secondary	75	41.0	139	39.8	134	37.4
Higher	35	19.1	104	29.8	114	31.8
<i>Father's education</i>	148	100	344	100	347	100
Primary	7	4.7	6	1.7	6	1.7
Vocational	75	50.7	130	37.8	140	40.3
Secondary	62	41.9	134	39.0	124	35.7
Higher	4	2.7	74	21.5	77	22.2

Table 7. continuation

SGC	49	57.4	105	45.7	126	35.7
<i>Mother's education</i>	48	100	104	100	124	100
Primary	4	8.3	1	1.0	3	2.4
Vocational	10	20.8	32	30.8	28	22.6
Secondary	19	39.6	34	32.7	45	36.3
Higher	15	31.3	37	35.6	48	38.7
<i>Father's education</i>	48	100	101	100	122	100
Primary	1	2.1	4	4.0	0	0
Vocational	18	37.5	35	34.7	40	32.8
Secondary	16	33.2	36	35.6	41	33.6
Higher	13	27.2	26	25.7	41	33.6
GEN			301	59.1	231	68.8
<i>Mother's education</i>			296	100	226	100
Primary			5	1.7	2	0.9
Vocational			47	15.9	39	17.2
Secondary			108	36.5	79	34.8
Higher			136	45.9	107	47.1
<i>Father's education</i>			289	100	225	100
Primary			3	1.0	3	1.3
Vocational			66	22.8	70	31.1
Secondary			104	36.0	60	26.7
Higher			116	40.1	92	40.9

Note. For each first grade in a given school year, this was Measurement 1 – indicated in the table as (1); not all students provided information about their parents' education in the questionnaire, hence the missing data (compared to the data given in Tables 3-6).

4.7. Parents' education and the chosen type of upper secondary school

Statistical analysis showed that in the three compared years (cohorts) of first-grade students – i.e., the first-grade students from three consecutive school years (2012/2013, 2013/2014, and 2014/2015) – there was the same tendency: namely, the children of parents with primary and vocational education chose upper secondary schools with vocational curricula more often than schools with general (comprehensive) curricula. The opposite was the case for children of parents with secondary and higher education. The association of parents' education with school type choice was significant, though weak and similar in strength in the case of mothers (Table 8a; Cramér's V for consecutive school years: .22, .18, and .18) and in the case of fathers (Table 8b; Cramér's V : .15, .18, and .18).

Table 8a. The Significance of Differences in Mother's Education Level Among First-Grade Students of Different Types of Upper Secondary Schools (% of Students With Mothers Having a Given Level of Education)

Mother's education	Cohort 1: Grade 1 school year 2012/2013 <i>n</i> = 301				Cohort 2: Grade 1 school year 2013/2014 <i>n</i> = 862				Cohort 3: Grade 1 school year 2014/2015 <i>n</i> = 795			
	BVS	TEC	SGC	GEN	BVS	TEC	SGC	GEN	BVS	TEC	SGC	GEN
primary	8.6	2.2	8.3		8.0	3.7	1.0	1.7	2.3	3.1	2.4	0.9
vocational	57.1	37.7	20.8		51.3	26.6	30.8	15.9	59.8	27.7	22.6	17.2
secondary	28.6	41.0	39.6		30.1	39.8	32.7	36.5	31.0	37.4	36.3	34.8
higher	5.7	19.1	31.3		10.6	29.8	35.6	45.9	6.9	31.8	38.7	47.1
χ^2	28.81				86.82				77.91			
<i>p</i>	< .001				< .001				< .001			
Cramér's <i>V</i>	.22				.18				.18			

Table 8b. The Significance of Differences in Father's Education Level Among First-Grade Students of Different Types of Upper Secondary Schools (% of Students With Fathers Having a Given Level of Education)

Father's education	Cohort 1: Grade 1 school year 2012/2013 <i>n</i> = 264				Cohort 2: Grade 1 school year 2013/2014 <i>n</i> = 851				Cohort 3: Grade 1 school year 2014/2015 <i>n</i> = 775			
	BVS	TEC	SGC	GEN	BVS	TEC	SGC	GEN	BVS	TEC	SGC	GEN
primary	4.4	4.7	2.1		8.4	1.7	4.0	1.0	1.2	1.7	0	1.3
vocational	60.3	50.7	37.5		56.1	37.8	34.7	22.8	72.8	40.3	32.8	31.1
secondary	29.4	41.9	33.2		28.0	39.0	35.6	36.0	22.2	35.7	33.6	26.7
higher	5.9	2.7	27.2		7.5	21.5	25.7	40.1	3.7	22.2	33.6	40.9
χ^2	13.36				85.67				72.70			
<i>p</i>	< .05				< .001				< .001			
Cramér's <i>V</i>	.15				.18				.18			

To show the relations between mother's and father's education and the type of upper secondary school chosen by the child (a lower secondary school graduate) more clearly, we distinguished two categories of education level: (1) "primary or vocational" and (2) "secondary or higher." The distribution of students beginning the first grade in each type of school in consecutive school years according to mother's and father's education, divided into two categories, is shown (as percentages) in Tables 8c and 8d and illustrated in Figures 1a and 1b.

Table 8c. The Distribution (in %) of First-Grade Students in Each Type of School in Consecutive School Years According to Mother's Education Level

Mother's education	Cohort 1: Grade 1 school year 2012/2013 <i>n</i> = 301				Cohort 2: Grade 1 school year 2013/2014 <i>n</i> = 862				Cohort 3: Grade 1 school year 2014/2015 <i>n</i> = 795			
	BVS	TEC	SGC	GEN	BVS	TEC	SGC	GEN	BVS	TEC	SGC	GEN
primary / vocational	65.7	39.9	29.1		59.3	30.3	31.8	17.6	62.1	30.8	25.0	18.1
secondary / higher	34.3	60.1	70.9		40.7	69.6	68.3	82.4	37.9	69.2	75.0	81.9
<i>n</i>	70	183	48		113	349	104	296	87	358	124	226

Table 8d. The Distribution (in %) of First-Grade Students in Each Type of School in Consecutive School Years According to Father's Education Level

Father's education	Cohort 1: Grade 1 school year 2012/2013 <i>n</i> = 264				Cohort 2: Grade 1 school year 2013/2014 <i>n</i> = 851				Cohort 3: Grade 1 school year 2014/2015 <i>n</i> = 775			
	BVS	TEC	SGC	GEN	BVS	TEC	SGC	GEN	BVS	TEC	SGC	GEN
primary / vocational	64.7	55.4	39.6		64.5	39.5	38.7	23.8	74.0	42.0	32.8	32.4
secondary / higher	35.3	44.6	60.4		35.5	60.5	61.3	76.1	25.9	57.9	67.2	67.6
<i>n</i>	68	148	48		117	344	101	289	81	347	122	225

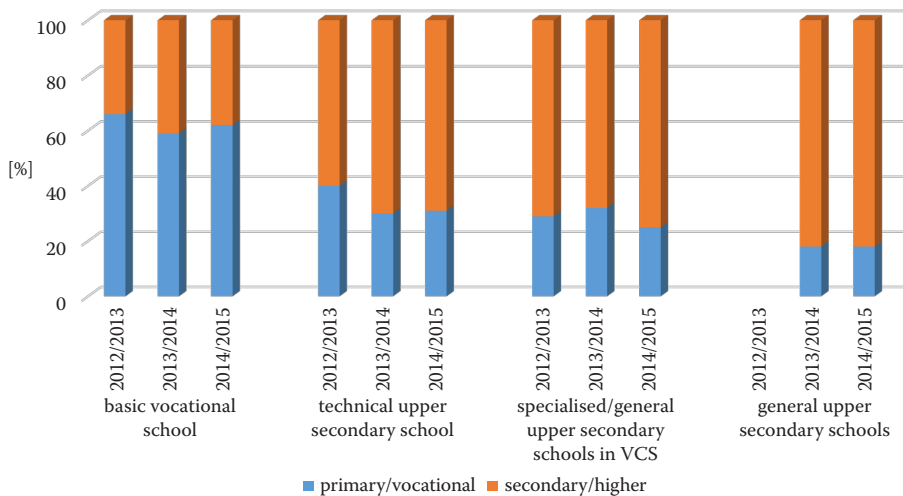


Figure 1a. The education of first-grade students' mothers in three cohorts (the values of *n* and the % of students in both categories of mother's education are given in Table 8c).

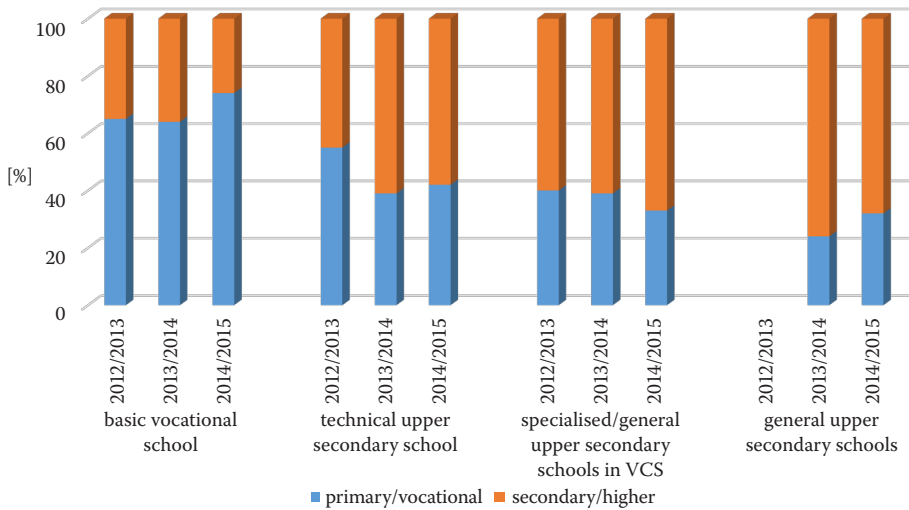


Figure 1b. The education of first-grade students' fathers in three cohorts (the values of *n* and the % of students in both categories of father's education are given in Table 8d).

5. Research Instruments

5.1. Instruments used in each stage of research

In statistical analyses, we examined the identity statuses (variable Y) identified in the compared groups of students – based on the configuration of the five

Table 9. Instruments Used in the Main Study

Variable status	Instrument	Scale	Measurement 1	Measurement 2	Measurement 3	Measurement 4	Measurement 5	Measurement 6
Variable Y	DIDS/PL	1 – 6	x	x	x	x	x	x
X ₁ Cognitive correlates	ISI-4/PL	1 – 5	x	x				x
	NFC-S/PL	1 – 6						x
X ₂ Emotional correlates	RWA/PL	1 – 6						x
	PFQ-2/PL	1 – 5	x	x	x	x	x	x
	DERS/PL	1 – 5	x	x		x		
X ₃ Social correlates	ERQ/PL	1 – 5			x	x	x	
	SRS/PL	1 – 5			x	x	x	
	ADES-S/PL	0 – 10			x	x	x	
X ₃ Social correlates	ISRI/PL	1 – 5					x	x
	SPQ1-S	1 – 5	x	x		x		x
	SWLS/PL	1 – 6						x

dimensions of identity development – and their expected cognitive, emotional, and social correlates (cross-sectional comparisons) or determinants (longitudinal comparisons) (variable X). Table 9 shows in which measurements a particular instrument was administered, and brief descriptions all the instruments used are presented in Table 10.

5.2. Description of research instruments

The main research instrument, measuring the intensity of dimensions of identity development and, based on their configuration, making it possible to determine the type of identity status, was the *Dimensions of Identity Development Scale* (DIDS). It had been developed by scholars from the University of Leuven, Koen Luyckx and his team (Luyckx, Schwartz, Berzonsky, Soenens, Vansteenkiste, Smits, & Goossens, 2008), and adapted into Polish by Anna I. Brzezińska and Konrad Piotrowski (DIDS/PL; Brzezińska & Piotrowski, 2010; for the revised version DIDS/PL-R, see Piotrowski & Brzezińska, in press). We administered DIDS/PL in each of the six measurements (cf. Table 9).

Cognitive correlates were measured by means of three questionnaires. The first one was Michael Berzonsky's (1992) *Identity Style Inventory* (ISI) as adapted into Polish by Alicja Senejko and Ewa Kręglicka-Forysiak (ISI-4/PL; the adaptation procedure is presented in: Senejko, 2010). The second questionnaire was the *Need for Closure Scale* – short version (NFC-S/PL), developed by Małgorzata Kossowska et al. (2012a; cf 2012b), and the third one was Robert Altemeyer's commonly used *Right-Wing Authoritarianism Scale* (RWA; Polish adaptation by Radkiewicz, 2011).

Emotional correlates were measured by means of five instruments – all of them adapted into Polish by Tomasz Czub. These were: (1) *Personal Feelings Questionnaire* (PFQ-2) by David Harder (1995; see also: Harder & Zalma, 1990); (2) *Difficulties in Emotion Regulation Scale* (DERS) by Gratz and Roemer (2004); (3) *Emotion Regulation Questionnaire* (ERQ); (4) *Shame Rumination Scale* (SRS/PL), developed by Tomasz Czub on the basis of the *Sadness and Anger Rumination Inventory* (SARI; Peled & Moretti, 2010) (SRS/PL); (5) *Adolescent Dissociative Experiences Scale* (ADES; Smith & Carlson, 1996).

Social correlates were measured by means of three instruments: (1) *Social Participation Questionnaire* – short version (SPQ1-S) by Anna Brzezińska, Szymon Hejmanowski, and Małgorzata Rękosiewicz (for description, see: Rękosiewicz, 2013a); (2) James Côté's *Identity Stage Resolution Index* (ISRI; Côté, 1996, 1997, cf. also 2002) as adapted into Polish by Konrad Piotrowski and Anna I. Brzezińska (ISRI/PL: Piotrowski & Brzezińska, 2015; see also:

Table 10. Instruments Used in the Main Study: Measurement Areas and Scales

Number of items	Instrument name – area measured – scales
1.	<p>Dimensions of Identity Development Scale (DIDS/PL)</p> <p>Five dimensions of identity development:</p> <ol style="list-style-type: none"> 1. exploration in breadth (5 items): the extent to which the individual is looking for various options regarding his or her goals, values, and beliefs 2. commitment making (5 items): the extent to which the individual has made choices and commitments regarding issues important to identity development 3. exploration in depth (5 items): in-depth evaluation of the already made decisions and choices (i.e., the already made commitments) in order to determine the degree to which these commitments meet personal standards 4. identification with commitment (5 items): the degree to which the individual identifies with the choices and commitments made; the scale measures their internalisation and the sense of certainty that the choices made were/are the right ones 5. ruminative exploration (5 items): the intensity of the individual's fears and problems experienced while engaging in areas important to identity development; it may indicate the intensity of identity crisis <p>The configuration of scores on the five dimensions (the profile) allows for identifying the type of identity status.</p>
2.	<p>Identity Style Inventory – experimental version (ISI-4/PL)</p> <p>COGNITIVE CORRELATES</p> <p>Three styles of cognitive processing of identity problems + an additional scale:</p> <ol style="list-style-type: none"> 1. informational style (5 items): found in people who are self-reflective, explore the environment, want to get to know themselves better, and actively seek information relating to the self 2. normative style (4 items): found in people who adopt expectations, values, and regulations from their significant others and whose main goal is to protect their outlook on life that has been formed in this way. 3. diffuse-avoidant style (4 items): characterised by delaying and postponing the moment of handling problems as well as by reluctance to confront, accept, or deal with unpleasant situations, personal problems, and identity conflicts 4. commitment (4 items): provides a sense of purpose and direction of activity and underlies the processes of monitoring behaviour and generating feedback
3.	<p>Need for Closure Scale (NFC-S/PL)</p> <p>The short, 15-item version of the NFC Scale measures functioning motivated by the cognitive need for possessing clear and certain knowledge reducing a sense of uncertainty</p>

Table 10 – continuation

<p>Apart from yielding an overall score, the instrument consists of five scales measuring different aspects of the need for cognitive closure:</p> <ol style="list-style-type: none"> 1. discomfort with ambiguity (3 items): preference for clear and certain situations 2. preference for order (3 items): a tendency to act in accordance with rules, apply discipline, and live a well-organised life 3. preference for predictability (3 items): preference for familiar and predictable situations and people 4. closed-mindedness (3 items): a tendency to formulate quick and confident judgements, to avoid ambiguity, and to avoid approaching a problem from many perspectives 5. decisiveness (3 items): a tendency to make firm decisions; absence of hesitation in solving problems 4. Right-Wing Authoritarianism Scale (RWA/PL) 	
12	<p>The measurement of the level of right-wing authoritarianism, understood as submissiveness towards authorities, conventionalism (subscribing to conventional norms and values), and a tendency to be aggressive towards people who do not subscribe to traditional values, connected with conservative ideology. We used a short version of the instrument, consisting of 12 items measuring one construct.</p>
<p>EMOTIONAL CORRELATES</p>	
5. Personal Feelings Questionnaire (PFQ-2/PL)	
19	<p>The tendency to experience shame and a sense of guilt – 3 scales (+ two buffer questions):</p> <ol style="list-style-type: none"> 1. a tendency to experience shame (7 items): a sense of embarrassment and humiliation, a sense of being an object of other people's attention 2. a tendency to experience guilt (6 items): remorse and a feeling of regret 3. a tendency to experience pride (4 items): feeling pride in one's achievements
6. Difficulties in Emotion Regulation Scale (DERS/PL)	
23	<p>Six dimensions of difficulties in emotion regulation:</p> <ol style="list-style-type: none"> 1. nonacceptance of emotional responses (4 items): secondary negative emotional responses in situations of experiencing negative emotions as well as nonacceptance of negative emotions 2. difficulties engaging in goal-directed behaviour (4 items): difficulties in maintaining focus on the goal and in achieving the goal in a situation of experiencing negative emotions 3. impulse control difficulties (4 items): difficulties in maintaining behaviour control in situations of experiencing negative emotions 4. lack of emotional awareness (3 items): a tendency to focus attention on emotions (scores are recorded) 5. limited access to emotion regulation strategies (5 items): weak belief that in a situation of experiencing negative emotions it is possible to do anything to effectively regulate unpleasant emotions 6. lack of emotional clarity (3 items): difficulties in recognising what emotions exactly one is experiencing

7. Emotion Regulation Questionnaire (ERQ/PL)	
Two scales measuring the emotion regulation strategies used by individuals:	
10	1. expressive suppression (6 items); modulating a fully developed emotional response 2. cognitive reappraisal (4 items): a change of the way of thinking about a situation, leading to a change of emotional response
8. Shame Rumination Scale (SRS/PL)	
All the items make up one Shame Rumination Scale:	
11	1. shame rumination: persistently recurring thoughts, usually aversive, about experiences of shame
9. Adolescent Dissociative Experiences Scale – short version (ADES-S/PL)	
The intensity of dissociative experiences (e.g., momentary loss of contact with oneself or the environment while daydreaming) – two scales + overall score	
10	1. amnesia (4 items) 2. depersonalisation (6 items)
SOCIAL CORRELATES	
10. Social Participation Questionnaire – short version (SPQ1-S)	
Two types of life orientation, based on which it is possible to identify the type of social participation (marginalisation, segregation, assimilation, or integration)	
20	1. moratorium orientation (10 items) (MO; Ger. <i>gegenwartsorientierte Enttafelung</i>): the behaviours regarded as valuable (and therefore engaged in) are those that give immediate gratification 2. transitive orientation (10 items) (TO; Ger. <i>Transition</i>): focus on striving to achieve goals located in the future – in adulthood
11. Identity Stage Resolution Index (ISRI/PL)	
Developed to test the assumptions of James Côté's identity capital model, the instrument consists of 7 items making up two scales:	
7	1. Adult Identity Resolution scale (3 items) – the degree to which a person has a sense of being an adult (e.g., <i>I feel respected by others as an adult</i>) 2. Community Identity Resolution scale (4 items) – the degree to which a person has a sense of having already found his or her place in the social world (e.g., <i>I have found a community in which to live for the remainder of my life</i>).
12. Satisfaction With Life Scale (SWLS/PL)	
5	A Polish adaptation of the popular instrument measuring satisfaction with life. The instrument consists of five items measuring one construct.

Piotrowski, 2015); (3) *Satisfaction With Life Scale* (SWLS; Diener *et al.*, 1985) as adapted into Polish (SWLS/PL) by Zygfryd Juczyński (2009).

5.3. Reliability of research instruments

Both in the pilot study and in each stage of the main study, we tested the reliability of the instruments administered. The reliability index was Cronbach's α coefficient. The obtained values of α are presented in Table 11.

The reliability of most of the scales used was acceptable, usually ranging between around .60 and .90. The instruments that turned out to be the least reliable were the short version of the *Need for Closure Scale*, administered in the last measurement (although in the case of the *Preference for Order* dimension the obtained reliability coefficient of .70 was moderately high), and the *Right-Wing Authoritarianism Scale*, whose reliability (.49) hardly makes it possible to have much confidence in the scores.

Yet, given the number of instruments used and, in some cases, their mutually complementary character as well as the acceptable reliability of a vast majority of them, it can be expected that the results obtained in the project reliably reflect the links between the analysed phenomena in the tested sample, which is particularly important in the case of longitudinal analyses.

6. Data Analysis Plan

We analysed the results presented in this study in three stages. The object of analysis in each case was the types of identity statuses found in the tested groups of upper secondary school students as well as their cognitive, emotional, and social correlates. We also analysed the role of students' gender and age (grade / level of education) and their parents' education. All analyses were performed for each type of upper secondary school (basic vocational school, technical upper secondary school, specialised or general upper secondary school in a vocational school complex, and general upper secondary school).

First, we performed simple cross-sectional comparisons and, on their basis, time-sequential comparisons of six groups of students tested in three consecutive school years: 2012/2013, 2013/2014, and 2014/2015. We obtained three sets of results in the first semester of each school year and three further sets in the second semester of each school year. In 2012/2013, only students from vocational school complexes were tested; in school years 2013/2014 and 2014/2015, general upper secondary school students were included in the sample. The results of these analyses are presented in Chapter 5.

Table 11. Cronbach's α Reliability of the Research Instruments

Stage of research / no. and time of measurement Instrument / dimensions	Pilot study		Main study													
	Measurement 0		Measurement 1		Measurement 2		Measurement 3		Measurement 4		Measurement 5		Measurement 6			
	Spring 2012	Autumn 2012	Spring 2013	Autumn 2013	Spring 2013	Autumn 2013	Spring 2014	Autumn 2014	Spring 2014	Autumn 2014	Spring 2015	Autumn 2015	Spring 2015	Autumn 2015		
n	α	n	α	n	α	n	α	n	α	n	α	n	α	n	α	
<i>DIDS/PL – Dimensions of Identity Development Scale</i>																
Exploration in breadth	1986	.72	1049	.71	1437	.75	2400	.75	2400	.76	2418	.76	2418	.76	2020	.76
Exploration in depth	1984	.66	1048	.66	1433	.66	2392	.65	2392	.66	2409	.70	2409	.70	2017	.69
Ruminative exploration	1999	.73	1047	.81	1444	.84	2395	.83	2395	.80	2421	.80	2421	.80	2026	.80
Commitment making	1997	.88	1049	.90	1440	.92	2392	.91	2392	.91	2414	.91	2414	.91	2030	.91
Identification with commitment	1968	.83	1047	.82	1427	.85	2382	.83	2382	.83	2395	.84	2395	.84	2015	.84
<i>ISI-4/PL – Identity Style Inventory</i>																
Diffuse-avoidant style	-	-	1049	.58	1432	.64	-	-	-	-	-	-	-	-	2028	.69
Normative style	-	-	1041	.64	1433	.65	-	-	-	-	-	-	-	-	2029	.73
Informational style	-	-	1047	.73	1437	.79	-	-	-	-	-	-	-	-	2025	.81
<i>NFC-S/PL – Need for Closure Scale – short version</i>																
Preference for order	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2009	.70
Preference for predictability	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	.63
Discomfort with ambiguity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2021	.58
Closed-mindedness	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2017	.58
Decisiveness	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2015	.61

Table 11 – continuation

<i>RWA/PL – Right-Wing Authoritarianism Scale</i>														
Overall score	–	–	–	–	–	–	–	–	–	–				
	1955	–	–	–	–	–	–	–	–	–				
<i>PFQ-2/PL – Personal Feelings Questionnaire</i>														
Shame	944	.83	1018	.87	1399	.88	2388	.86	2067	.87	2402	.87	2014	.87
Guilt	962	.76	1023	.82	1388	.84	2394	.81	2068	.82	2416	.82	2016	.83
Pride	–	–	1040	.73	1428	.76	2394	.85	2075	.84	2418	.85	2024	.86
<i>DEERS/PL – Difficulties in Emotion Regulation Scale</i>														
Lack of emotional awareness	1008	.67	1049	.64	1448	.70	–	–	255	.47	–	–	–	–
Lack of emotional clarity	1005	.72	1045	.68	1430	.70	–	–	280	.80	–	–	–	–
Nonacceptance of emotional responses	1011	.78	1049	.77	1443	.89	–	–	259	.86	–	–	–	–
Difficulties engaging in goal-directed behaviour	1012	.80	1052	.88	1443	.81	–	–	263	.85	–	–	–	–
Impulse control difficulties	1011	.86	1052	.92	1440	.93	–	–	261	.88	–	–	–	–
Limited access to emotion regulation strategies	1011	.84	1050	.87	1440	.88	–	–	260	.88	–	–	–	–
<i>ERQ/PL – Emotion Regulation Questionnaire</i>														
Cognitive reappraisal	–	–	–	–	–	–	2343	.78	2023	.79	2345	.81	–	–
Expressive suppression	–	–	–	–	–	–	2397	.65	2070	.69	2424	.69	–	–

<i>SRS/PL – Shame Rumination Scale</i>													
Overall score	-	-	-	-	-	2366	.93	2033	.94	2389	.93	-	-
<i>ADES-S/PL – Adolescent Dissociative Experiences Scale – short version</i>													
Amnesia	-	-	-	-	-	2383	.70	2065	.74	2406	.74	-	-
Depersonalisation	-	-	-	-	-	2379	.73	2033	.75	2391	.76	-	-
<i>SPQ1-S – Social Participation Questionnaire – short version</i>													
Moratorium orientation	949	.90	1042	.80	1419	.83	-	310	.81	-	-	1984	.81
Transitive orientation	942	.88	1044	.85	1428	.86	-	302	.83	-	-	2008	.83
<i>ISRI/PL – Identity Stage Resolution Index</i>													
Adult identity	-	-	-	-	-	-	-	-	-	2385	.73	2029	.75
Community identity	-	-	-	-	-	-	-	-	-	2380	.68	2027	.67
<i>SWLS/PL – Satisfaction With Life Scale</i>													
Overall score	-	-	-	-	-	-	-	-	-	-	-	2018	.82

In the second step, we performed time-lag comparisons (three cohorts) and longitudinal comparisons (data from two measurements for each cohort) – plus, on their basis, cohort-sequential comparisons. They concerned the scores obtained by three years (cohorts) of students, who started and completed the first grade in three consecutive school years. The results are presented in Chapter 6.

The third step was simple longitudinal comparisons and, based on them, complex cross-sequential comparisons. We performed them on a set of scores obtained by the students who were tested six times (each semester, from Semester 1 of school year 2012/2013 to Semester 2 of school year 2014/2015) and four times (each semester, from Semester 1 of school year 2013/2014 to Semester 2 of school year 2014/2015), seeking to identify the trends and character of changes (progressive and regressive vs. stagnation) in identity dimensions and statuses and their psychological determinants. The results are presented in Chapter 7.

7. Concluding Remarks

The simple six-time cross-sectional comparisons and the complex time-sequential comparisons based on them, performed in the first step of statistical analysis, had heuristic value. They were supposed to identify the directions to follow in search of determinants (correlates) and the areas of difference between individuals with different identity statuses depending on the type of school, age (grade), and gender as well as both parents' levels of education.

The simple time-lag comparisons, the simple longitudinal comparisons (separate for each of the three cohorts), and the complex cohort-sequential comparisons based on them, performed in the second step, were supposed to answer the question of whether the identified profiles of scores and the directions of changes (longitudinal comparisons) can be attributed to students' age and the stage of education (first grade) or rather to the type of educational offer (vocational vs. general curriculum).

Finally, the simple longitudinal comparisons (see Table 1) and the complex cross-sequential comparisons based on them, performed in the third step, were supposed to answer the question of the magnitude and character (trend) of changes in the intensity of identity dimensions and, consequently, in the type of identity status as well as the psychological determinants of those changes.

Chapter 5

IDENTITY STATUSES AND THEIR CORRELATES: ANALYSIS OF THE RESULTS OF CROSS-SECTIONAL AND TIME-SEQUENTIAL COMPARISONS



1. Introduction

The research was to begin with performing simple cross-sectional analyses separately for each of the six groups tested in six consecutive stages of the study (Table 1) and then to compare the groups for similarities and differences concerning the types of identity statuses and their contextual as well as psychological correlates. All groups consisted of students of Grades 1-3 (and also Grade 4 in the case of technical upper secondary schools), diverse in terms of age and gender and attending different types of upper secondary schools. The first two groups comprised only students of six different vocational school complexes (VSCs), whereas the other four groups also included students of three general upper secondary schools that were not part of vocational school complexes.

The second and more important step in the analysis was comparisons performed according to a time-sequential design (cf. Bee, 2004, pp. 22-24). Because we did not administer the same set of questionnaires in every stage of the study (Table 2), we performed time-sequential comparisons separately for Groups 1 and 2 and separately for Groups 3, 4, and 5. In Group 6, we performed only simple cross-sectional analyses.

Cross-sectional comparisons had three aims. The first aim was to test the hypotheses concerning the role of gender, age/grade, type of upper secondary school, mother's education, and father's education in differentiating identity statuses in each group of students tested in consecutive stages of the main study. The analyses performed earlier, in the pilot study, indicated – though

Table 1. The Plan of Cross-Sectional (6 Times) and Time-Sequential Comparisons (2 Times)

Type of upper secondary school and grade Group and measurement time	Basic vocational school in a VSC	Technical upper secondary school in a VSC	Specialised/general upper secondary school in a VSC	General upper secondary school (not part of VSC)	
	Grades 1-3	Grades 1-4	Grades 1-3	Grades 1-3	
Group 1 Autumn 2012	$n = 1033$			↕	
Group 2 Spring 2013	$n = 1428$				
Group 3 Autumn 2013	$n = 2373$				↕
Group 4 Spring 2014	$n = 2062$				
Group 5 Autumn 2014	$n = 2409$				
Group 6 Spring 2015	$n = 2011$				

not systematically – the important differentiating role of some of these factors (Brzezińska, Czub, & Piotrowski, 2014; Jankowski, 2013; Jankowski & Rękosiewicz, 2013; Kaczan, Brzezińska, & Wojciechowska, 2013; Piotrowski, 2013). On the other hand, the aim was to establish what psychological variables were associated with the identity statuses distinguished in each of the six groups. The correlation and regression model of analyses being the only one applicable in the case of cross-sectional comparisons, it is only possible here to speak of the cognitive, emotional, or social correlates, not determinants (“causes” / “reasons”), of a given identity status.

The second aim was to establish, by means of time-sequential comparisons, whether or not the patterns of similarities and differences regarding demographic and psychological variables as correlates of identity statuses differed between the compared groups: Groups 1 and 2 (the same set of five measures: DIDS/PL, ISI-4/PL, PFQ-2/PL, DERS/PL, SPQ1-S) and Groups 3, 4, and 5 (a different set of five measures: DIDS/PL, PFQ-2/PL, ERQ/PL, SRS/PL, ADES-S/PL).

Table 2. Instruments Used in Testing the Six Groups of Students

Instrument used: name and the area measured	School yr 2012/2013		School yr 2013/2014		School yr 2014/2015	
	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
	DIDS/PL	x	x	x	x	x
ISI-4/PL	x	x				x
NFC-S/PL						x
RWA/PL						x
PFQ-2/PL	x	x	x	x	x	x
DEERS/PL	x	x				
ERQ/PL			x	x	x	
SRS/PL			x	x	x	
ADES-S/PL			x	x	x	
SPQ1-S	x	x		x		x
ISRI/PL					x	x
SWLS/PL						x

The third aim was to prepare psychological profiles of students: (a) with identity diffusion, characteristic for the precrisis phase of the identity formation process; (b) with identity moratorium, indicating that the person has entered the phase of crisis resolution or continues to experience identity crisis; (c) with statuses indicating that a particular form of identity has already developed (two types of formed identity: the *achievement* status or the *foreclosure* status) as a result of a resolution – at least temporary – of identity crisis (postcrisis phase).

2. Types of Identity Statuses in Upper Secondary School Students

2.1. The method of distinguishing identity statuses

Identity statuses – that is, specific configurations of the five investigated dimensions of identity development – were distinguished by means of an empirical two-step cluster analysis (Gore, 2000). First, we standardised the raw scores obtained from all students tested in a given stage (from different types of upper

secondary schools and from all grades in those schools) and then we excluded the so-called outliers – namely, the individuals with scores higher or lower than the mean score by at least three times the value of standard deviation.

The first step was hierarchical cluster analysis using Ward's method, in which the measure of dissimilarity is squared Euclidean distance. This procedure yielded three, four, five, and six clusters in consecutive steps. Next, we evaluated each solution in terms of: (1) construct validity, (2) the “economic” criterion (each cluster had to be characterised by a different configuration of identity dimensions, not merely by their different levels), and (3) the percentage of variance in particular dimensions explained by the clusters (criterion: not less than 50% of explained variance in each of the five dimensions). Based on these criteria, we determined the optimal number of clusters in each measurement.

The second stage of the analysis was the use of the preliminary cluster centres from hierarchical analysis as starting points for *k*-means cluster analysis. The results of this analysis – clusters (relatively homogeneous subgroups) of students – constituted the final outcome of the procedure applied. The method we used is well-known to and frequently used by researchers.

2.2. Types of identity statuses identified in the comparison groups

In each of the six sets of results analysed separately, the use of cluster analysis allowed for distinguishing subgroups of students with similar profiles (intensity and configuration) of the five dimensions of identity development – i.e., with a similar identity status.

In the first, fourth, fifth, and sixth groups, we identified five subgroups of students differing in terms of identity status and labelled them as follows: *diffused diffusion*, *undifferentiated identity*, *ruminative moratorium*, *foreclosure*, and *achievement*. Additionally, we identified the sixth identity status in the second and third groups – *carefree diffusion*. Table 3 and Figure 1a present the number and percentage of students with a given identity status in each of the six groups, and Figure 1b presents the number of students in combined identity status categories: (a) identity diffusion (i.e., before identity crisis resolution), (b) identity moratorium (i.e., in the process of identity crisis resolution; “being in crisis”), and (c) formed identity (i.e., after identity crisis resolution).

The results showed that in all the compared groups there were students in different phases of experiencing and resolving identity crisis (Table 3). However, the proportion of individuals with a particular identity status was different in each group (Figure 1a). Groups 1 and 6 and Groups 4 and 5 were the most

Table 3. Types of Identity Statuses Identified in the Comparison Groups – Cross-Sectional Comparisons

Group and measurement time	<i>f</i> %	Identity status type						Total <i>n</i> %
		Identity diffusion Precrisis phase		Identity moratorium Being in crisis		Formed identity Postcrisis phase		
		Diffused diffusion	Carefree diffusion	Undifferentiated identity	Ruminative moratorium	Foreclosure	Achievement	
Group 1	<i>f</i>	139	–	284	226	154	230	1033
Autumn 2012	%	13.5	–	27.5	21.9	14.9	22.3	100
Group 2	<i>f</i>	217	168	336	227	216	264	1428
Spring 2013	%	15.2	11.8	23.5	15.9	15.1	18.5	100
Group 3	<i>f</i>	289	504	572	362	320	326	2373
Autumn 2013	%	12.2	21.2	24.1	15.3	13.5	13.7	100
Group 4	<i>f</i>	428	–	563	315	383	373	2062
Spring 2014	%	20.8	–	27.3	15.3	18.6	18.1	100
Group 5	<i>f</i>	494	–	646	408	423	438	2409
Autumn 2014	%	20.5	–	26.8	16.9	17.6	18.2	100
Group 6	<i>f</i>	322	–	578	368	336	407	2011
Spring 2015	%	16	–	28.7	18.3	16.7	20.2	100

similar in terms of the proportions of students with a given status. The most diverse one was Group 3. Similarity was low, too, between the groups tested in the first semester of each consecutive school year (Groups 1, 3, and 5) and between the groups tested in the second semester (Groups 2, 4, and 6). What also attested to differences between the groups was the proportion of students with statuses representing the combined categories of identity diffusion, identity moratorium, and formed identity in each group (cf. Figure 1b).

The greatest intergroup difference concerned the number of students with identity diffusion statuses – they constituted from 13.4% in the first group to as much as 33.4% in the second group (Figure 1b). These were individuals in the precrisis phase, with identity still unformed and immature, not engaging in activities aimed at resolving identity crisis. This group comprised students with the *diffused diffusion* status – the most numerous in the fourth (20.8%) and fifth groups (20.5%), and with the *carefree diffusion* status – the most numerous in the second (11.8%) and third groups (21.2%). Individuals with identity diffusion are characterised by a low intensity of exploratory activities, by not making identity commitments and a lack of identification with the commitments

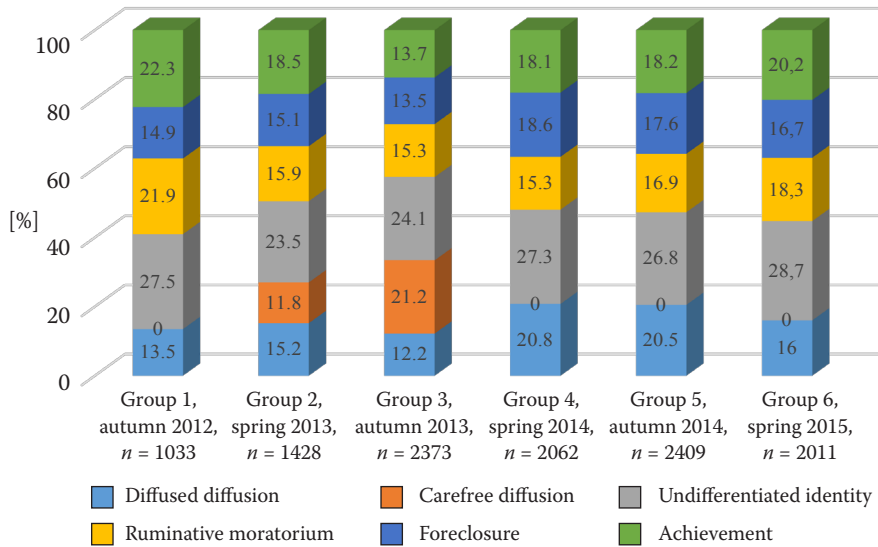


Figure 1a. Cross-sectional comparisons: the percentages of students with different identity statuses in the six comparison groups (the value of n for each status is given in Table 1a)

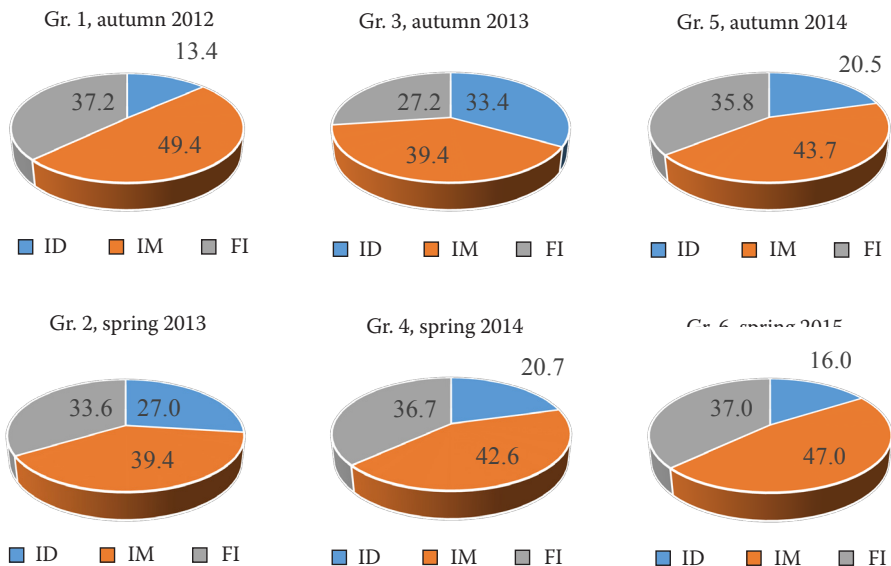


Figure 1b. Cross-sectional comparisons: the percentages of students with statuses of identity diffusion, identity moratorium, and formed identity in the six comparison groups (the values of n are given in Table 1b)

Note. ID – identity diffusion; IM – identity moratorium; FI – formed identity

already made, and by relatively intense or moderate ruminative exploration, which, on the one hand, is a manifestation of anxiety and uncertainty, while on the other it may feedback on and intensify anxieties and fears. Ruminative exploration was the strongest in students with the *diffused diffusion* status in Groups 2 and 3 (cf. Figure 2). In the group of students with the *carefree diffusion* status, the lack of in-breadth and in-depth exploratory behaviours or commitment-related ones was accompanied by weak ruminative exploration. Perhaps this is a group in which identity crisis resolution will proceed without the experience of uncertainty and a sense of confusion, intrinsically connected with rumination (Beyers & Luyckx, 2015; cf. Jarmakowski, 2011).

The second intergroup difference, though only half as large as the first one, concerned the proportion of students with moratorium statuses – from 39.4% in the second and third groups to 49.4% in the first group. This category comprised two types of identity statuses. The *undifferentiated identity* status was found in a very similar proportion of students in each of the six groups (from 23.5% to 28.7%). Differences were greater in the case of *ruminative moratorium*: from 15.3% in the third and fourth groups to 21.9% in the first group. The analysis of the profile, presented in Figure 2, revealed a similar intensity of identity dimensions in the case of *undifferentiated identity* and, likewise, in the case of the *ruminative moratorium* status. A moderately high level of ruminative exploration (more than one standard deviation above the mean) was found in the fourth, fifth, and sixth groups.

The third difference – nearly 10%, as in the case of the second one – concerned the number of students with already formed identity statuses. They constituted from 27.2% of the participants in the third group to 33.6-37.2% in the remaining five groups, very similar in this respect. In the third group, the percentage of participants was similar for the two types of formed identity: 13.5% had the *foreclosure* status and 13.7% had the *achievement* status. The proportion of participants with the *foreclosure* status was the largest in Group 4 (18.6%), while participants with the *achievement* status were the most numerous in Groups 1 (22.3%) and 6 (20.2%). The analysis of the configuration of identity dimensions depicted in Figure 2 reveals very similar profiles across the compared groups for both statuses of formed identity – *foreclosure* and *achievement*.

In conclusion, it is worth stressing that in all six groups (cf. Figure 2) the level of ruminative exploration was the lowest in students with formed identity statuses (*foreclosure* and *achievement*), which indicates that, in their case, the process of identity crisis resolution had already ended, though the outcome of this resolution were two identity statuses entirely different as regards their regulatory influence on behaviour.

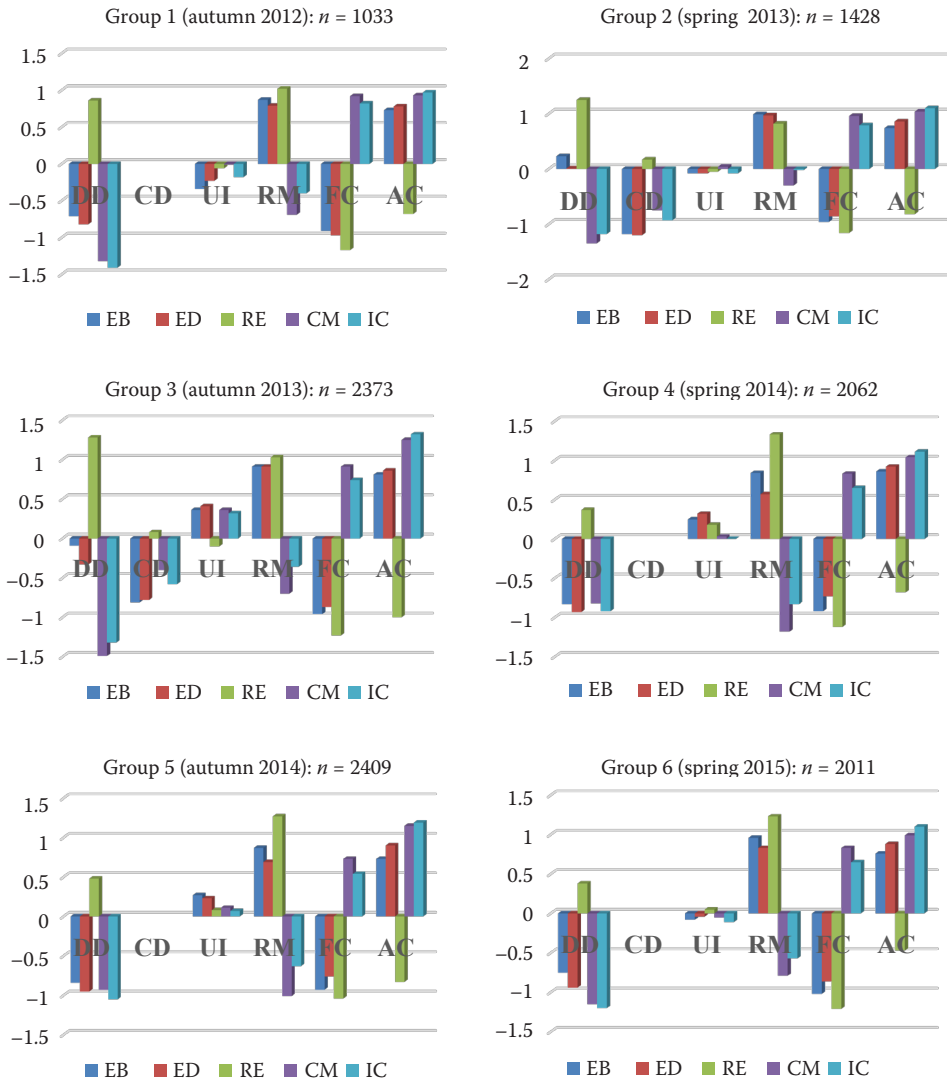


Figure 2. Configurations of identity development dimensions in groups with different identity statuses

Note. (1) identity statuses: DD – diffused diffusion; CD – carefree diffusion; UI – undifferentiated identity; RM – ruminative moratorium; FC – foreclosure; AC – achievement; (2) identity dimensions: EB – exploration in breadth; ED – exploration in depth; RE – ruminative exploration; CM – commitment making; IC – identification with commitment

In all six groups, a similar tendency is visible – namely, while the level of ruminative exploration was generally low in participants with formed identity,

it was lower in individuals with the *foreclosure* status than in those with the *achievement* status. Apparently, the adoption (“foreclosure”) of some kind of identity from the environment in a form more or less “ready-made” and only slightly modified by the effects of one’s own exploratory activities (note the low level of exploration in breadth and in depth and the very low level of ruminative exploration) relieves anxieties as well as eliminates fears and doubts and thus reduces the sense of identity confusion to a greater extent than resolving identity crisis through one’s own explorations and the risk this involves (the *achievement* status).

3. Factors Differentiating Students’ Identity Statuses

3.1. Type of upper secondary school as a factor differentiating students’ identity statuses

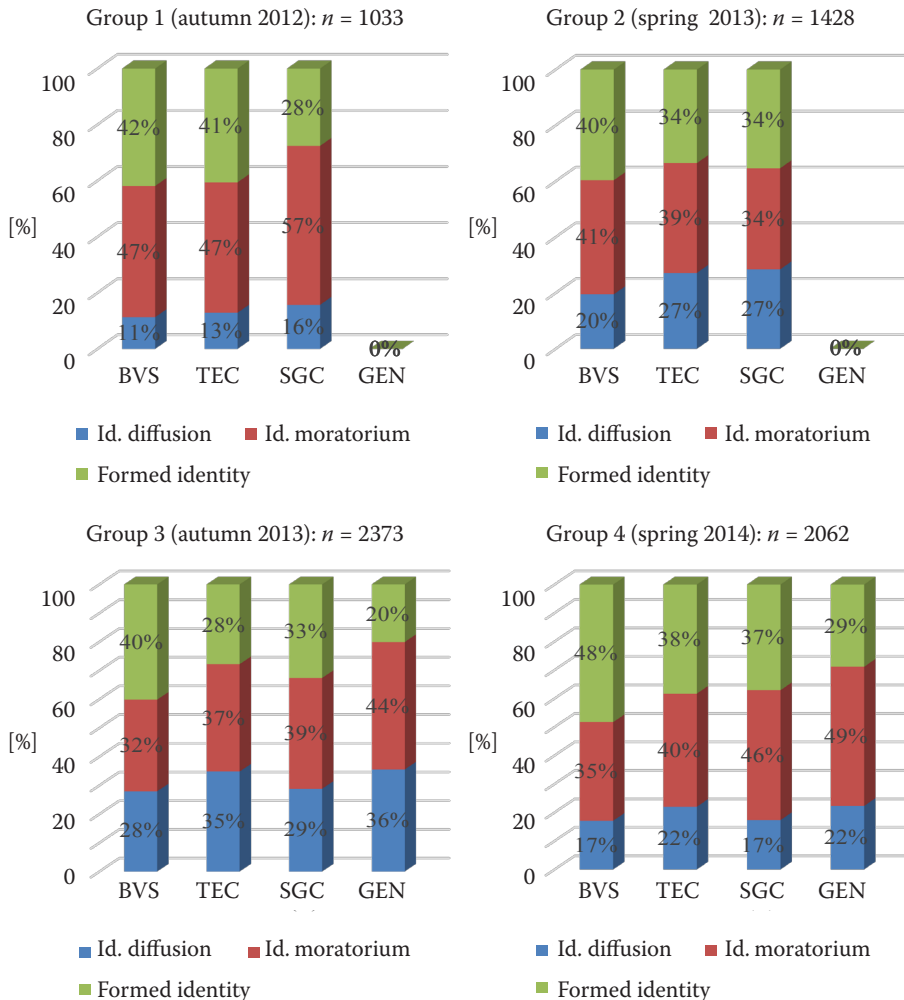
The analysis of results showed that in all comparison groups the type of school was a factor associated with the students having a particular identity status. This association – though statistically significant in every group at $p < .001$ – was relatively weak (the values of Cramér’s V ranged from .10 to .16) (cf. Table 4).

Figure 3 presents differences in the percentage of students of different types of upper secondary schools in each of the compared groups in terms of identity type: “precrisis” identity (identity diffusion), being “in crisis” (identity moratorium), and “postcrisis” (formed) identity. These are not systematic differences, but a certain tendency is visible: the least frequent identity type among basic vocational school students in every group was identity diffusion (from 11% to 28%), and the most frequent one – also in every group – was formed identity (from 40% to 48%). As regards general and technical upper secondary school students as well as students attending specialised upper secondary schools functioning as part of vocational school complexes (apart from Group 2), the most often found type was identity moratorium. It was also much more frequent in general upper secondary school students than in their peers from specialised, general, and technical upper secondary schools in vocational school complexes as well as from general upper secondary schools that were not part of a VSC. Thus, the order of schools in the case of identity moratorium (“being in crisis”) was as follows: GEN (the most often) > SGC > TEC > BVS (the least often).

Detailed distribution analyses of the frequency of occurrence of each identity status revealed that the *ruminative moratorium* status, involving the experience of fears and numerous doubts, was the least frequent in basic vocational

school students and the most frequent in students of general upper secondary schools and in specialised or general upper secondary schools functioning as part of vocational school complexes. In every group, the *foreclosure* status (formed identity) occurred the most often in basic vocational school students, followed by students of technical upper secondary schools and specialised or general upper secondary schools in vocational school complexes, and the least often in general upper secondary school students. The other status – *achievement*, also an end product of identity formation – was not systematically associated with the type of school.

It can therefore be said that a majority of the tested students in basic vocational schools (in each of the compared groups) had identity crisis resolution



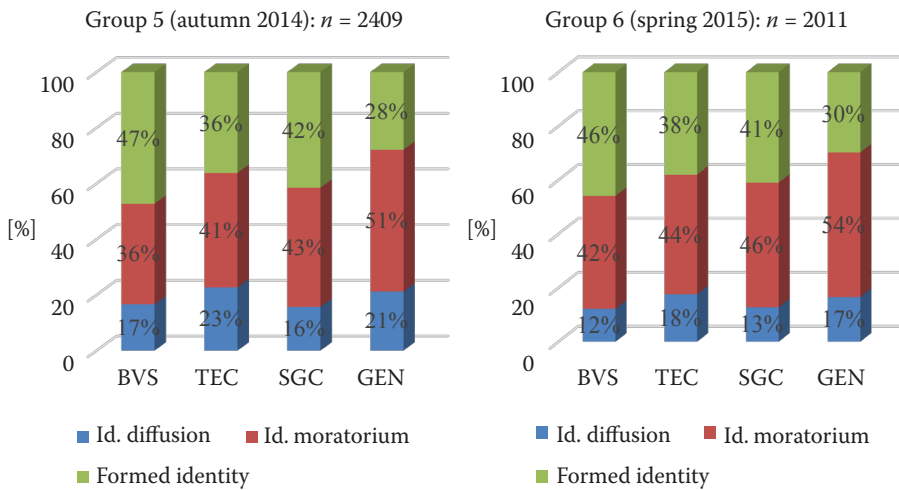


Figure 3. Type of upper secondary school as a factor differentiating identity statuses: cross-sectional comparisons

Note. BVS – basic vocational school; TEC – technical upper secondary school; SGC – specialised or general upper secondary school in a vocational school complex; GEN – general upper secondary school (not in a VSC)

already behind them, whereas a majority of students in specialised and general upper secondary schools (especially those general ones that were not part of a VSC), were still struggling with that crisis.

3.2. Gender and age as factors differentiating students' identity statuses

The students' gender turned out to be a factor significantly though weakly associated with a particular identity status in Groups 3, 4, 5, and 6 (Cramér's V ranging from .13 to .17; cf. data in Table 5). Figure 4 presents identity statuses found among females and males in the four comparison groups in which gender differences in the frequency of identity statuses were significant. In each group, *ruminative moratorium* occurred much more often in women than in men. The *foreclosure* status, in contrast, was much more frequent in male participants – also in each comparison group. The *undifferentiated identity* status and the most mature status – *achievement* – occurred similarly often in participants of both genders.

The students' age (grade/level of education) turned out to be weakly associated with the type of identity status, and only in two of the six comparison

groups – in Groups 4 and 6 (Cramér's V was .06 and .08, respectively). However, differences between grades are not the same in the two groups, even though both were tested in the second semester of the school year – towards the end of a given grade. In the youngest students (Grade 1), the most frequent statuses were *diffused diffusion* and *undifferentiated identity* in Group 4 and *undifferentiated identity* in Group 6. In the case of the oldest students (Grade 4 of technical upper secondary schools), the most frequent status in Group 4 was *undifferentiated identity*, while in Group 6 the most frequent one was *undifferentiated identity*, followed by *achievement*. In both groups, the largest number of students in each grade exhibited the *undifferentiated identity* status (more than 25% of students). Other differences in the frequency of statuses are

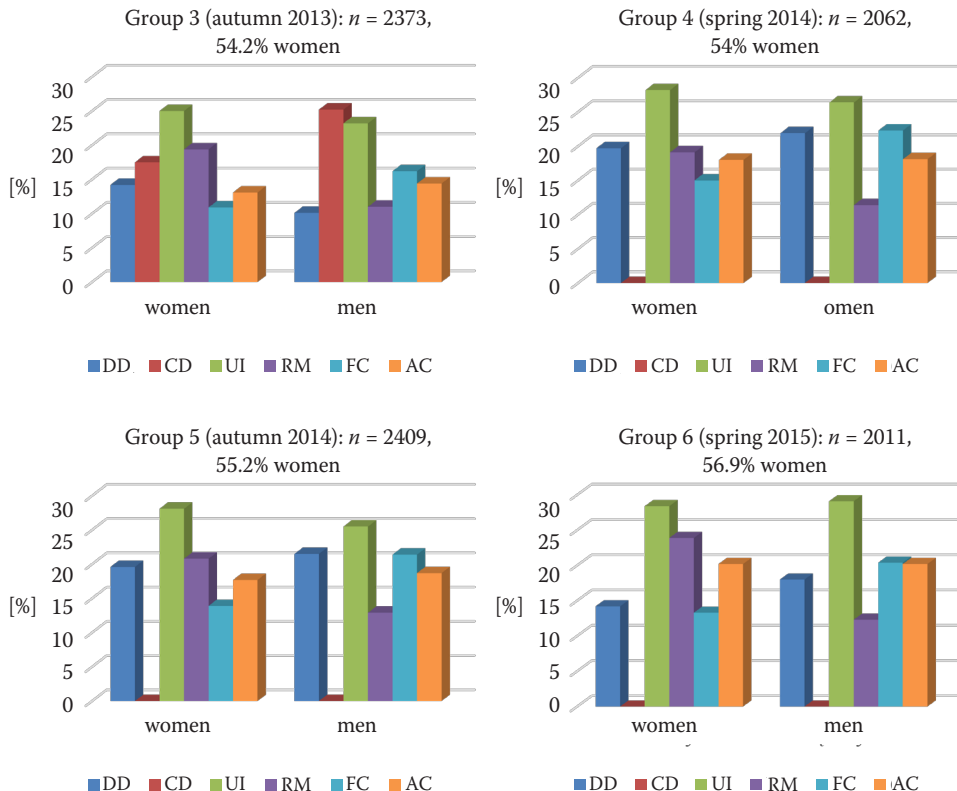


Figure 4. Gender as a factor differentiating identity statuses: cross-sectional comparisons

Note. DD – diffused diffusion; CD – carefree diffusion; UI – undifferentiated identity; RM – ruminative moratorium; FC – foreclosure; AC – achievement

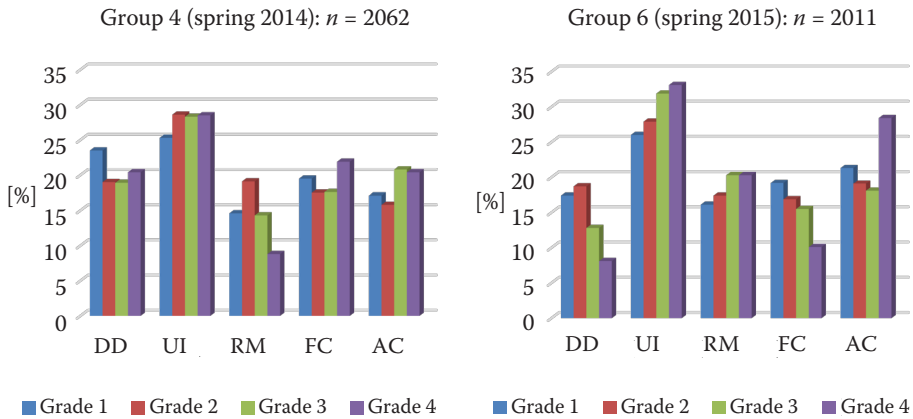


Figure 5. Age (grade) as a factor differentiating identity statuses: cross-sectional comparisons

Note. DD – diffused diffusion; UI – undifferentiated identity; RM – ruminative moratorium; FC – foreclosure; AC – achievement

not systematic, and it is difficult to relate them to how old the students were or which grade they attended (Figure 5).

3.3. Parents' education as a factor differentiating students' identity statuses

Mother's education was not associated with the students' identity status; father's education turned out to be significant, though only marginally ($\chi^2(12) = 27.46, p < .01$, Cramér's $V = .07$; cf. Table 5) and only in Group 6 (Figure 6a).

The analysis of identity statuses from the perspective of the identity crisis resolution process showed (Figure 6b) that the largest proportion of students who had coped with identity crisis were those whose fathers had secondary education. A detailed analysis (Figure 6a) showed that the *undifferentiated identity* status occurred the most often in each of the groups compared in terms of father's education, though it was predominant in children of fathers with vocational education. The status characteristic for students whose fathers had primary education (Figure 6a) was *diffused diffusion*, and the one characteristic for children of fathers with higher education was *ruminative moratorium*. Among students whose fathers had secondary education, apart from the *undifferentiated identity* status, the analysis also revealed the *achievement* status – being the most frequent one in these participants compared to all other students.

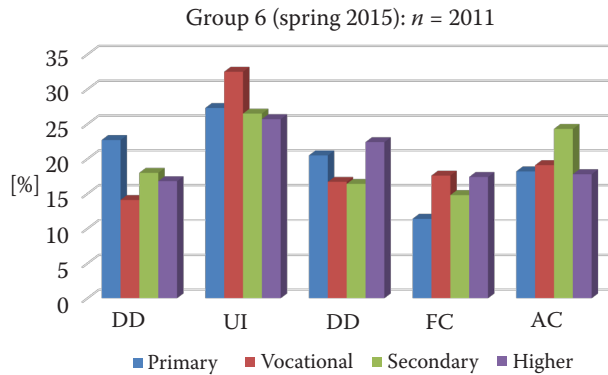


Figure 6a. Father's education as a factor differentiating identity statuses

Note. DD – diffused diffusion; UI – undifferentiated identity; RM – ruminative moratorium; FC – foreclosure; AC – achievement

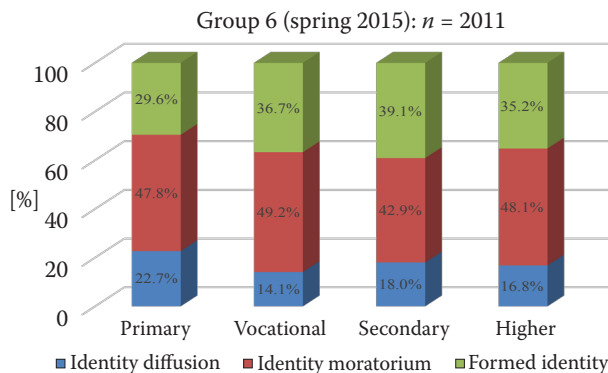


Figure 6b. Father's education as a factor differentiating identity categories

Perhaps parents' education interacted with other factors, such as the type of upper secondary school, which may be suggested by the fact that children of parents with primary or vocational education more often attended vocation-oriented schools than general (comprehensive) ones, while the converse was true for children of parents with secondary or higher education (cf. data in Tables 7 and 8a-d as well as in Figures 1a and 1b in Chapter 4).

3.4. Findings

The results of statistical analyses performed as part of cross-sectional comparisons, separately for each comparison group, make it possible to conclude that

(*I want to / I am allowed to*) and instrumental (*I am able to*), to embark on and make use of the opportunities he or she was offered in a particular type of school and outside it.

4. Psychological Correlates of Identity Statuses

4.1. Students of vocational school complexes: Groups 1 and 2

In both groups of students attending vocational school complexes who were tested in school year 2012/2013 (in Semester 1 – Group 1; in Semester 2 – Group 2), we administered the same sets of questionnaires (Table 5). This makes it possible to compare the intensity and configuration (profile) of the measured variables and their relations with identity status. If the differences between the first and the second group were significant, it would be possible to speak of a “semester effect” – namely, an influence of the moment in the process of education (beginning vs. end a given grade in a particular school year) on the motivation to take part in the study and on the quality of the students’ reflection on themselves and their life.

The aim of the analysis was to assess differences in the levels of the measured variables (correlates of identity statuses) between participants with different identity statuses in the two compared groups. Table 6 presents the values of arithmetical means and standard deviations for all subgroups of students with different identity statuses in Group 1 (five subgroups with different statuses) and in Group 2 (six subgroups with different statuses).

The analysis of the values of F and effect size (η^2) showed that participants with different identity statuses differed mainly in the styles of processing identity problems – diffuse style ($\eta^2 = .23$ in Group 1, $\eta^2 = .24$ in Group 2) and informational style ($\eta^2 = .12$ in Group 1, $\eta^2 = .14$ in Group 2), in the level of two self-conscious emotions – shame ($\eta^2 = .10$ in Group 1, $\eta^2 = .10$ in Group 2) and pride ($\eta^2 = .10$ in Group 1, $\eta^2 = .12$ in Group 2), and in the intensity of transitive life orientation ($\eta^2 = .28$ in Group 1, $\eta^2 = .32$ in Group 2). In contrast, the type of difficulties in emotion regulation was very weakly associated with identity status. The only exception was the effect of the lack of emotional awareness ($\eta^2 = .09$ in both groups) – this effect was high compared to other dimensions of difficulties in emotion regulation. Figures 7a and 7b present the configurations of the variables measured (identity styles, the level of self-conscious emotions, difficulties in emotion regulation, and life orientation) in the two compared groups of students.

Table 5. Variables Measured and Instruments Used in School Year 2012/2013: Semesters 1 and 2 (Groups 1 and 2)

Dependent variable	Cognitive correlates		Emotional correlates		Social correlates
	ISI-4/PL	Identity styles	PFQ-2/PL	DERS/PL	SPQ1-S
Identity status and type			Self-conscious emotions	Difficulties in emotion regulation	Life orientation
identity diffusion: 1. diffused diffusion 2. carefree diffusion identity moratorium: 3. undifferentiated identity 4. ruminative moratorium formed identity: 5. foreclosure 6. achievement	diffuse-avoidant style normative style informational style	shame guilt pride	lack of emotional awareness lack of emotional clarity nonacceptance of emotional responses impulse control difficulties limited access to emotion regulation strategies difficulties engaging in goal-directed behaviour		moratorium orientation transitive orientation

Table 6. Identity Statuses and the Level (Arithmetic Means and Standard Deviations) of the Variables Measured in Group 1 ($n = 1033$) and in Group 2 ($n = 1428$): The Significance of Differences Between Subjects With Different Identity Statuses

Variable and group	Type of identity status						F_{ANOVA} $p <$ η^2
	Identity diffusion		Identity moratorium		Formed identity		
	Diffused diffusion	Carefree diffusion	Undifferentiated identity	Ruminative moratorium	Foreclosure	Achievement	
Identity styles							
Diffuse-avoidant style DS	1	2.89 (0.69)d	2.36 (0.71)b	2.61 (0.76)c	1.74 (0.68)a	1.91 (0.67)a	77.42 .001 .23
	2	2.93 (0.72)d	2.67 (0.70)c	2.28 (0.69)b	2.54 (0.79)c	1.83 (0.67)a	1.84 (0.68)a
Normative style NS	1	2.66 (0.71)a	3.12 (0.70)b	3.04 (0.69)b	3.12 (0.86)b	3.36 (0.81)c	19.04 .001 .07
	2	2.74 (0.65)a	2.76 (0.62)a	3.11 (0.68)b	3.13 (0.74)b	3.03 (0.80)b	3.34 (0.81)c
Informational style IS	1	3.88 (0.73)a	4.16 (0.56)b	4.41 (0.55)c d	4.26 (0.64)b c	4.54 (0.45)d	34.15 .001 .12
	2	4.06 (0.59)b	3.71 (0.73)a	4.10 (0.59)b c	4.41 (0.50)d	4.22 (0.68)c	4.46 (0.54)d
Self-conscious emotions							
Shame SH	1	2.51 (0.78)c	2.10 (0.70)b	2.41 (0.73)c	1.82 (0.67)a	1.96 (0.70)a b	28.15 .001 .10
	2	2.46 (0.81)d	2.05 (0.71)b c	2.11 (0.69)c	2.34 (0.82)d	1.74 (0.63)a	1.87 (0.62)a b

Guilt GU	1	2.83 (0.77)bc	2.65 (0.75)ab	2.92 (0.67)c	2.48 (0.73)a	2.62 (0.78)a	10.63 .001 .04
	2	2.87 (0.80)d	2.42 (0.70)a	2.62 (0.70)bc	2.81 (0.78)cd	2.47 (0.74)ab	20.18 .001 .07
Pride PR	1	3.01 (0.70)a	3.33 (0.66)b	3.43 (0.68)bc	3.60 (0.75)cd	3.77 (0.76)d	29.26 .001 .10
	2	3.15 (0.82)a	3.09 (0.69)a	3.39 (0.65)b	3.51 (0.76)b	3.88 (0.69)c	37.50 .001 .12
Difficulties in emotion regulation							
Lack of emotional awareness LEA	1	3.02 (1.04)c	2.58 (0.87)b	2.36 (0.83)ab	2.46 (0.92)b	2.14 (0.74)a	23.90 .001 .09
	2	2.63 (0.84)b	3.10 (0.98)c	2.59 (0.88)b	2.18 (0.79)d	2.27 (0.86)d	28.35 .001 .09
Lack of emotional clarity LEC	1	2.44 (1.04)b	1.93 (0.72)a	2.23 (0.79)b	1.72 (0.79)a	1.87 (0.73)a	22.13 .001 .08
	2	2.30 (0.87)e	2.01 (0.88)cd	1.92 (0.71)bc	2.20 (0.86)de	1.78 (0.74)ab	21.45 .001 .07
Nonacceptance of emotional responses NER	1	2.13 (1.04)bc	1.97 (0.82)ab	2.29 (0.94)c	1.75 (0.83)a	1.93 (0.93)ab	9.85 .001 .04
	2	2.33 (1.07)c	1.77 (0.85)ab	1.92 (0.81)b	2.26 (0.92)c	1.85 (0.85)ab	21.20 .001 .07

Table 6. continuation

Impulse control difficulties	1	2.73 (1.30)b	2.40 (1.10)a b	2.60 (1.32)b	2.10 (1.20)a	2.13 (1.15)a	9.39 .001 .04
ICD	2	2.67 (1.25)b	2.39 (1.13)b c	2.38 (1.18)c	1.92 (0.99)a	2.11 (1.16)a b	11.46 .001 .04
Limited access to emotion regulation strategies	1	2.53 (1.09)b	2.14 (0.92)a	2.64 (1.06)b	1.91 (0.94)a	2.09 (1.02)a	18.25 .001 .07
LER	2	2.54 (1.06)c	2.04 (0.96)b	2.42 (0.99)c	1.68 (0.76)a	1.95 (0.95)b	24.15 .001 .08
Difficulties engaging in goal-directed behaviour	1	3.32 (1.10)c	2.92 (1.04)b	3.44 (1.15)c	2.59 (1.17)a	2.89 (1.17)a b	17.20 .001 .06
DGB	2	3.39 (1.10)c	2.79 (1.11)b	3.20 (1.09)c	2.42 (1.01)a	2.66 (1.10)a b	24.71 .001 .08
Life orientation							
Moratorium orientation	1	3.45 (0.83)c	3.16 (0.72)b	3.25 (0.77)b c	2.79 (0.80)a	2.80 (0.76)a	24.05 .001 .09
MO	2	3.49 (0.81)d	3.44 (0.75)d	3.04 (0.73)b c	2.88 (0.79)a b	2.80 (0.79)a	29.69 .001 .10
Transitive orientation	1	2.89 (0.66)a	3.52 (0.58)b	3.57 (0.62)b	3.88 (0.67)c	4.12 (0.54)d	99.18 .001 .28
TO	2	3.06 (0.63)a	2.91 (0.67)a	3.56 (0.57)b	3.81 (0.65)c	4.16 (0.53)d	131.26 .001 .32

Despite numerous significant differences between students with different identity statuses (cf. the letter abbreviations in Table 6, showing the results of comparisons between the groups assessed by means of post hoc tests), there was a visible systematic tendency in both groups. Psychological characteristics were the most similar in subjects with formed identity (two statuses: *foreclosure* and *achievement*), and somewhat less similar in subjects with identity moratorium (two statuses: *undifferentiated identity* and *ruminative moratorium*). Students with the *diffused diffusion* and *ruminative moratorium* statuses (the level of ruminative exploration was high in both cases) also had similar profiles, with the exception that the level of transitive orientation was significantly higher in the latter.

It is possible to formulate the conclusion, requiring verification (with the gender and age variables in interaction with type of upper secondary school controlled for), that the precrisis phase (identity diffusion or even confusion) and the phase of identity crisis (identity moratorium) are connected with a con-

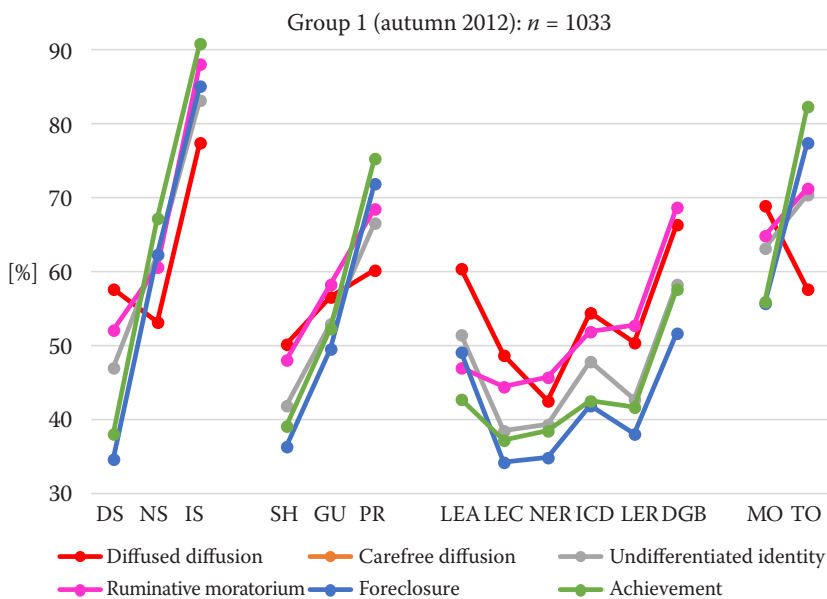


Figure 7a. Profiles of students with different identity statuses in Group 1, tested in the first semester of school year 2012/2013.

Note. DS – diffuse-avoidant style of processing identity problems; NS – normative style; IS – informative style; SH – shame; GU – guilt; PR – pride; LEA – lack of emotional awareness; LEC – lack of emotional clarity; NER – nonacceptance of emotional responses; ICD – impulse control difficulties; LER – limited access to emotion regulation strategies; DGB – difficulties engaging in goal-directed behaviour; MO – moratorium orientation; TO – transitive orientation

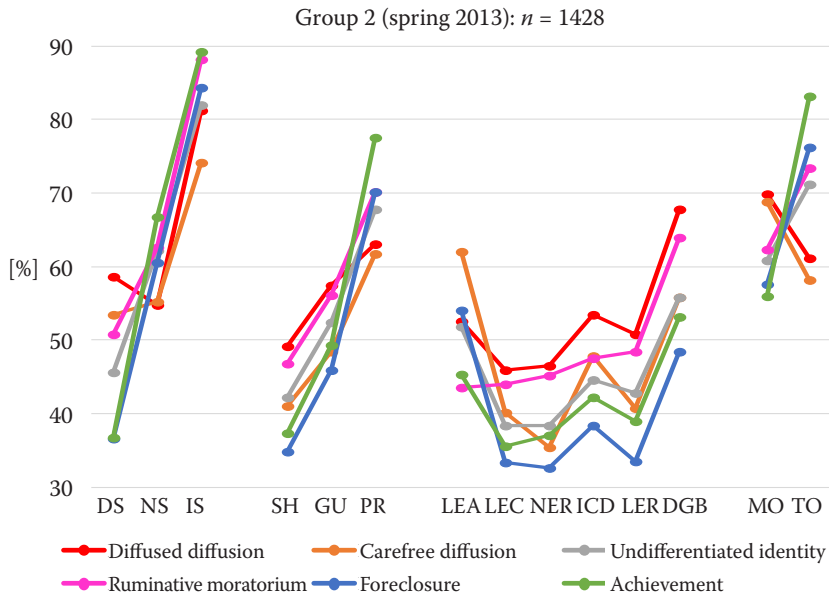


Figure 7b. Profiles of students with different identity statuses in Group 2, tested in the second semester of school year 2012/2013.

Note. DS – diffuse style of processing identity problems; NS – normative style; IS – informative style; SH – shame; GU – guilt; PR – pride; LEA – lack of emotional awareness; LEC – lack of emotional clarity; NER – nonacceptance of emotional responses; ICD – impulse control difficulties; LER – limited access to emotion regulation strategies; DGB – difficulties engaging in goal-directed behaviour; MO – moratorium orientation; TO – transitive orientation

siderable diversity (individualisation) of developmental paths, while identity crisis resolution (and, as a result, formed identity: *foreclosure* or *achievement*) leads to these paths becoming similar.

Generally, a higher level of identity formation resulting from identity crisis resolution was associated with a proportionally lower level of diffuse style of processing identity information and a proportionally higher level of informational style (though the latter was also frequent in participants with strong ruminative exploration – that is, in individuals with the *diffused diffusion* and *ruminative moratorium* statuses) as well as with weaker shame and guilt, a stronger sense of pride, weaker moratorium orientation, and much stronger transitive orientation. Moreover, the results obtained in both groups (1 and 2) showed that participants with the statuses of *diffused diffusion* and *ruminative moratorium*, in whom ruminative exploration was intensive, experienced greater difficulties in emotion regulation than individuals with the remaining identity statuses.

4.2. Students of vocational school complexes and general upper secondary schools: Groups 3, 4, and 5

In the next step of the analysis, we compared the scores of three groups, each of which consisted of students from vocational school complexes and general upper secondary schools. Group 3 was tested in the first semester of school year 2013/2014, Group 4 was tested in the second semester of the same year, and Group 5 – in the first semester of the next school year, 2014/2015. Table 7 presents the instruments administered to these three groups.

Table 7. Variables Measured and Instruments Used in School Year 2013/2014 (Semesters 1 and 2) and in School Year 2014/2015 (Semester 1) (Groups 3, 4, and 5)

Dependent variable	Emotional correlates			
	PFQ-2/PL	SRS/PL	ERQ/PL	ADES-S/PL
DIDS/PL Identity type and status	Self-conscious emotions	Shame rumination	Emotion regulation strategies	Dissociative experiences
Identity diffusion: 1. diffused diffusion 2. carefree diffusion	shame guilt	shame rumination	cognitive reappraisal strategy	amnesia depersonalisation
Identity moratorium: 3. undifferentiated identity 4. ruminative moratorium	pride		expressive suppression strategy	
Formed identity: 5. foreclosure 6. achievement				

We sought an answer to the question of whether or not the levels of different characteristics of the students' emotional functioning were related to their identity status. Table 8 presents the values of arithmetic means and standard deviations for all subgroups of students with different identity statuses in Group 3 (six subgroups with different statuses) and in Groups 4 and 5 (five subgroups with different statuses in each group).

It turned out that only some of the characteristics of emotional functioning differentiated individuals with different identity statuses, and only weakly. In the domain of self-conscious emotions, the effect was the strongest for the sense of pride. In each group, pride was the highest in participants with formed identity: it was similarly high in individuals with the *foreclosure* status and in those with the *achievement* status. The lowest sense of pride was found in students with the statuses of *diffused diffusion* and *ruminative moratorium*. Both of these subgroups exhibited a high level of ruminative exploration, involving

Table 8. Identity Statuses and the Levels (Arithmetic Means and Standard Deviations) of the Variables Measured in Group 3 ($n = 2373$), in Group 4 ($n = 2062$), and in Group 5 ($n = 2409$): The Significance of Differences Between Participants With Different Identity Statuses

Variable and group	Type of identity status							F_{ANOVA} $p <$ η^2
	Identity diffusion		Identity moratorium		Formed identity			
	Diffused diffusion	Carefree diffusion	Undifferentiated identity	Ruminative moratorium	Foreclosure	Achievement	Achievement	
	Self-conscious emotions							
3	2.53 (0.79)c	2.05 (0.63)b	2.15 (0.68)b	2.49 (0.79)c	1.76 (0.58)a	2.01 (0.74)b	57.94 $p < .001$	
4	2.12 (0.75)c		2.15 (0.68)c	2.53 (0.79)d	1.76 (0.56)a	1.96 (0.68)b	56.47 $p < .001$	
5	2.22 (0.75)c		2.11 (0.67)b c	2.53 (0.83)d	1.80 (0.61)a	2.02 (0.68)b	58.65 $p < .001$	
3	2.86 (0.72)d	2.46 (0.68)b	2.64 (0.67)c	2.99 (0.78)d	2.21 (0.63)a	2.55 (0.74)b c	53.78 $p < .001$	
4	2.51 (0.73)b		2.62 (0.71)b	2.95 (0.76)c	2.25 (0.65)a	2.51 (0.72)b	43.55 $p < .001$	
5	2.56 (0.76)b		2.62 (0.69)b	2.94 (0.79)c	2.29 (0.66)a	2.62 (0.70)b	41.50 $p < .001$	

	3	2.51 (0.82)a	2.92 (0.71)b	3.13 (0.73)c	2.88 (0.77)b	3.38 (0.85)d	3.50 (0.80)d	69.72 <i>p</i> < .001 .13
Pride PR	4	2.89 (0.80)b	3.10 (0.73)c	2.72 (0.80)a	3.38 (0.76)d	3.46 (0.75)d	59.92 <i>p</i> < .001 .11	
	5	2.82 (0.81)a	3.13 (0.76)b	2.78 (0.79)a	3.29 (0.80)c	3.45 (0.80)d	58.75 <i>p</i> < .001 .09	
Shame rumination								
	3	2.82 (0.77)d	2.33 (0.76)b	2.60 (0.80)c	2.90 (0.83)d	2.03 (0.79)a	2.39 (0.88)b	55.92 <i>p</i> < .001 .11
Shame rumination SR	4	2.32 (0.83)b	2.48 (0.77)b	2.83 (0.85)c	1.93 (0.78)a	2.34 (0.89)b	54.71 <i>p</i> < .001 .10	
	5	2.37 (0.78)b c	2.49 (0.80)c	2.84 (0.83)d	2.04 (0.78)a	2.34 (0.87)b	51.10 <i>p</i> < .001 .08	
Emotion regulation strategies								
	3	3.22 (0.75)a	3.30 (0.69)a	3.50 (0.71)b c	3.47 (0.78)b	3.36 (0.84)a b	3.65 (0.75)c	15.18 <i>p</i> < .001 .03
Cognitive reappraisal strategy CRE	4	3.32 (0.75)a	3.48 (0.70)b	3.36 (0.77)a b	3.40 (0.76)a b	3.69 (0.71)c	15.87 <i>p</i> < .001 .03	
	5	3.20 (0.78)a	3.49 (0.71)c	3.40 (0.87)b c	3.34 (0.82)b	3.67 (0.76)d	22.30 <i>p</i> < .001 .04	

Table 8. continuation

Expressive suppression strategy ESU	3	2.84 (0.91)	2.85 (0.80)	2.74 (0.84)	2.76 (0.86)	2.75 (0.86)	2.78 (0.89)	1.30 <i>ns</i>
	4	2.92 (0.81)		2.75 (0.85)	2.82 (0.89)	2.81 (0.89)	2.78 (0.85)	2.41 <i>ns</i>
	5	2.91 (0.89)		2.76 (0.88)	2.80 (0.86)	2.84 (0.87)	2.76 (0.89)	2.41 <i>ns</i>
Dissociative experiences								
Amnesia AMN	3	2.82 (0.77)c	2.33 (0.76)a	2.95 (1.92)a b	3.34 (1.99)b c	2.58 (1.83)a	2.81 (1.96)a	10.04 $p < .001$.02
	4	3.04 (1.99)b c		2.87 (1.89)a b	3.26 (2.05)c	2.49 (2.01)a	2.64 (1.95)a	8.61 $p < .001$.02
	5	3.26 (2.02)c d		3.01 (1.97)b c	3.41 (2.07)d	2.59 (1.97)a	2.83 (2.00)a b	11.18 $p < .001$.02
Depersona- l-isation DEP	3	2.72 (1.83)c d	2.23 (1.77)a b	2.60 (1.84)b c	3.01 (1.99)d	2.01 (1.68)a	2.56 (1.90)b c	13.52 $p < .001$.03
	4	2.29 (1.85)a b		2.42 (1.80)b c	2.68 (1.85)c	1.95 (1.70)a	2.29 (1.95)a b	7.35 $p < .001$.01
	5	2.60 (1.96)b c		2.50 (1.93)b c	2.82 (1.92)c	2.00 (1.79)a	2.41 (1.97)b	10.26 $p < .001$.02

the experience of fears and doubts as well as more frequent experience of shame than pride in oneself and one's achievements.

Shame was the highest in all three groups in participants with the status of *ruminative moratorium*, followed by *diffused diffusion* (high ruminative exploration) and *undifferentiated identity*. Measurements revealed a relatively low sense of shame in students with formed identity; what is interesting, the level of this variable was significantly higher in participants with the *achievement* status than in those with the *foreclosure* status.

Shame rumination significantly though weakly differentiated participants with different identity statuses, its level being the lowest in all three groups in individuals with the *foreclosure* status. Other differences were not as systematic as this one, although the level of shame rumination was the highest and similar in participants with *ruminative moratorium* and *undifferentiated identity*, which means it was associated with the phase of experiencing and resolving identity crisis. In students with the statuses of *diffused diffusion* and *achievement*, the level of shame rumination was similar and moderate compared to all the students we tested.

Neither the experience of dissociation nor preferences regarding emotion regulation strategies turned out to be significantly associated with any particular identity status. The values of effect size were negligible for both of these variables in all the three compared groups. The value of η^2 for the first emotion regulation strategy – cognitive reappraisal – was .03 and .04, and in the case of the second strategy – expressive suppression – differences between the groups of students with different identity statuses turned out not to be statistically significant. The values of η^2 for both indicators of the experience of dissociation ranged between .01 and .03 in all the three compared groups, which means this factor was of little significance as well.

The conclusion that can be formulated refers to the small contribution of emotional factors to the description of differences in functioning between subjects with different identity statuses. It should be stressed that Groups 3, 4, and 5 were much more diverse than Groups 1 and 2, since they were composed of students representing four different types of upper secondary schools. Perhaps this factor blurred the differences between participants with different identity statuses to some extent. However, a more probable conclusion is that the dimensions of emotional functioning measured in the present study have little formative influence on the configuration and intensity of the dimensions of identity development. Perhaps it is factors other than those measured that are involved in coping with the emotions experienced in various phases of identity formation – namely, in the precrisis phase, during the crisis, and in the postcrisis phase.

4.3. Students of vocational school complexes and general upper secondary schools: Group 6

The group tested in the second semester of school year 2014/2015 – just like Groups 3 (tested in Semester 1 of sch. yr 2013/2014), 4 (tested in Semester 2 of sch. yr 2013/2014), and 5 (tested in Semester 1 of sch. yr 2014/2015) – was composed of students representing four types of upper secondary schools. In this stage of the study, after the implementation of the 2011 law introducing major changes to the structure of upper secondary education (Dz.U. [*Polish Journal of Laws*] no. 205, item 1206) – all students of vocational school complexes attended basic vocational schools, technical upper secondary schools, or general upper secondary schools. One of the directions of change was the liquidation of specialised upper secondary schools and specialised classes in general upper secondary schools in favour of schools or classes with a general (comprehensive) curriculum. The testing of Group 6 focused mainly on the cognitive and social correlates of identity status. The participants completed the eight questionnaires listed in Table 9 as well as DIDS/PL. Five identity statuses were distinguished in this group.

The results of statistical analysis, presented in Table 10, show that – as in Groups 1 and 2 – the factors significantly associated with the type of identity status were: diffuse and informational styles of processing identity problems (the value of η^2 effect size index is .24 and .11, respectively), shame ($\eta^2 = .10$), pride ($\eta^2 = .11$), and transitive life orientation ($\eta^2 = .26$).

Other factors significantly differentiating the types of identity statuses turned out to be – as cognitive correlates – the variables measured by two subscales of the *Need for Closure Scale*, namely preference for order ($\eta^2 = .09$) and decisiveness ($\eta^2 = .15$). The latter score should be approached with considerable caution, since the reliability of the scale measured by Cronbach's α was low and equal to .61 ($\alpha = .70$ for the *Preference for Order Scale*). Also two social correlates, namely community identity ($\eta^2 = .22$, Cronbach's $\alpha = .67$) as an indicator of identity capital and general satisfaction with life ($\eta^2 = .12$, Cronbach's $\alpha = .82$) significantly differentiated participants with different identity statuses.

The analysis of η^2 effects and the results of post hoc tests shows that the level of diffuse style of processing identity problems was the highest in subjects with the *diffused diffusion* status, significantly lower in participants with moratorium identity – i.e., with the statuses of *undifferentiated identity* and *ruminative moratorium* (there was no significant difference between these

Table 9. Variables Measured and Instruments Used in School Year 2014/2015: Semester 2 (Group 6)

Cognitive correlates			Emotional correlates	Social correlates		
ISI-4/PL	NFC-S/PL	RWA/PL	PFQ-2/PL	ISRI/PL	SPQ1-S	SWLS/PL
Identity styles	Need for cognitive closure	Right-wing authoritarianism	Self-conscious emotions	Identity capital	Life orientation	Satisfaction with life
diffuse style	closed-mindedness	authoritarianism	shame	adult identity	moratorium orientation	satisfaction with life
normative style	discomfort with ambiguity		guilt	community identity	transitive orientation	
informational style	preference for order		pride			
	preference for predictability					
	decisiveness					

two subgroups) – and the lowest in both groups with formed identity statuses: *foreclosure* and *achievement*. The same tendency occurred in Groups 1 and 2.

The informational style was the most intense in the group with the statuses of *achievement* and *ruminative moratorium*, slightly less so in two groups: with the *foreclosure* and *undifferentiated identity* status, and the least intense in the group with the *diffused diffusion* status.

The values of the indicators of the need for cognitive closure – *preference for order* and *decisiveness* – were the highest values in participants with formed identity and the lowest in participants with the statuses of *diffused diffusion* (low *preference for order*) and *ruminative moratorium* (low *decisiveness*).

The sense of shame was the lowest and the sense of pride was the highest in students with formed identity; individuals with the *foreclosure* and *achievement* statuses, representing this category, did not differ significantly in the level of pride, while the level of shame was slightly but significantly higher in students with the *achievement* status than in those with the *foreclosure* status. Students with the *foreclosure* status had the lowest sense of shame in the whole tested group, accompanied by a relatively high sense of pride.

Of the two life orientations that we tested, only one – transitive orientation – was fairly strongly associated with the type of identity status. Participants with

Table 10. Identity Statuses and the Levels (Arithmetic Means and Standard Deviations) of the Variables Measured in Group 6 (n = 2011): The Significance of Differences Between Participants With Different Identity Statuses

Variable	Type of identity					F_{ANOVA} $p <$ η^2
	Identity diffusion	Identity moratorium	Formed identity	Foreclosure	Achievement	
Diffuse style DS	Diffused diffusion 2.85 (0.72)c	Undifferentiated identity 2.40 (0.69)b	Ruminative moratorium 2.52 (0.73)b	1.79 (0.63)a	1.79 (0.71)a	157.51 $p < .001$.24
Normative style NS	2.66 (0.67)a	3.08 (0.71)c	2.82 (0.75)b	3.06 (0.83)c	3.33 (0.83)d	41.82 $p < .001$.08
Informational style IS	3.81 (0.69)a	4.15 (0.63)b	4.37 (0.53)c	4.20 (0.62)b	4.47 (0.51)c	61.67 $p < .001$.11
Need for cognitive closure						
Closed-mindedness CL	3.21 (0.74)c	2.98 (0.68)b	2.63 (0.72)a	3.00 (0.77)b	2.71 (0.78)a	35.85 $p < .001$.07
Discomfort with ambiguity DA	3.84 (0.75)a b	3.96 (0.74)b c	4.42 (0.75)d	3.72 (0.87)a	4.11 (0.90)c	40.71 $p < .001$.08
Preference for order PO	3.28 (0.84)a	3.78 (0.78)b	3.86 (0.98)b	3.71 (0.91)b	4.16 (0.89)c	46.55 $p < .001$.09
Preference for predictability PP	3.33 (0.94)a b	3.45 (0.81)b c	3.59 (1.00)c	3.27 (0.99)a	3.58 (1.00)c	8.74 $p < .001$.02
Decisiveness DC	3.39 (0.86)b	3.55 (0.77)b	2.97 (0.93)a	3.99 (0.86)c	3.92 (0.86)c	85.50 $p < .001$.15

Right-wing authoritarianism						
Right-wing authoritarianism RWA	3.39 (0.52)a	3.48 (0.49)a b	3.39 (0.54)a	3.46 (0.53)a b	3.50 (0.55)b	3.82 <i>p</i> < .01 .01
Self-conscious emotions						
Shame SH	2.15 (0.78)c	2.08 (0.69)c	2.49 (0.83)d	1.72 (0.57)a	1.93 (0.63)b	57.60 <i>p</i> < .001 .10
Guilt GU	2.47 (0.78)b	2.47 (0.68)b	2.80 (0.79)c	2.18 (0.66)a	2.43 (0.71)b	33.50 <i>p</i> < .001 .06
Pride PR	2.85 (0.81)a	3.14 (0.75)b	2.78 (0.82)a	3.39 (0.80)c	3.52 (0.79)c	60.77 <i>p</i> < .001 .11
Life orientation						
Moratorium orientation MO	3.44 (0.73)d	3.23 (0.74)c	3.07 (0.76)a b	3.10 (0.73)b c	2.94 (0.76)a	23.07 <i>p</i> < .001 .05
Transitive orientation TO	2.97 (0.59)a	3.56 (0.52)b	3.57 (0.63)b	3.62 (0.57)b	4.07 (0.49)c	174.08 <i>p</i> < .001 .26
Identity capital						
Adult identity AI	3.01 (0.71)a	3.28 (0.67)b	3.09 (0.73)a	3.43 (0.74)c	3.61 (0.69)d	43.42 <i>p</i> < .001 .08
Community identity CI	2.76 (0.69)a	3.22 (0.64)b	2.89 (0.71)a	3.60 (0.69)c	3.73 (0.70)c	139.23 <i>p</i> < .001 .22
Satisfaction with life						
Satisfaction with life SWL	3.49 (0.80)a	3.80 (0.74)b	3.51 (0.93)a	4.17 (0.84)c	4.23 (0.83)c	65.66 <i>p</i> < .001 .12

the *diffused diffusion* status – before the phase of resolving identity crisis – were characterised by the lowest level of this orientation. Its levels were significantly higher and similar in participants with three statuses: *undifferentiated identity*, *ruminative moratorium*, and *foreclosure*, and the highest in individuals with the *achievement* status. The order was the reverse in the case of moratorium orientation – the weakest in students with the *achievement* status and the strongest in individuals with the *diffused diffusion* status.

A comparison of the scores of Group 6 with those obtained by students in Groups 1, 2, and 4, also tested for life orientation, shows a similar tendency, namely: transitive orientation was more strongly associated with the type of identity status (the value of η^2 for Groups 1, 2, and 4 was .28; .32, and .19, respectively, and for Group 6 it was .26) than moratorium orientation (the value of η^2 was .09; .10, and .08 for Groups 1, 2, and 4, respectively, and .05 for Group 6).

Thus, in every group tested for type of life orientation (Groups 1, 2, 4, and 6) the analysis of results yielded the same tendency, namely: weak moratorium orientation and strong transitive orientation are found in individuals with formed identity, while strong moratorium orientation and weak transitive orientation are characteristic of people with the *diffused diffusion* status.

As regards identity capital, one of its indicators – adult identity – was significantly, though weakly, associated with identity status. Adult identity was the strongest in participants with the *achievement* status, followed by *foreclosure* and *undifferentiated identity*, and similarly low in two groups with strong ruminative exploration: in students with the statuses of *diffused diffusion* and *ruminative moratorium*. The second indicator of identity capital – community identity – differentiated participants with different identity statuses considerably better ($\eta^2 = .22$) than adult identity ($\eta^2 = .08$). Community identity was high in individuals from both groups with formed statuses (*foreclosure* and *achievement*), lower in individuals with *undifferentiated identity*, and the lowest in students with the status of *diffused diffusion*.

The quality of identity capital was also measured in Group 5. The results were similar to those obtained in Group 6. In both cases there was a weak effect for adult identity ($\eta^2 = .05$ for Group 5 and .08 for Group 6) and a much stronger effect for community identity ($\eta^2 = .23$ for Group 5 and .22 for Group 6). Also, the two groups exhibited a similar configuration of identity statuses according to the level of both identity capital indicators:

Identity capital indicator 1: *adult identity*

Gr 5 [diffused diffusion = ruminative moratorium] < undifferentiated identity < [foreclosure = achievement]

Gr 6 [diffused diffusion = ruminative moratorium] < undifferentiated identity < foreclosure < achievement

Identity capital indicator 2: *community identity*

Gr 5 [diffused diffusion = ruminative moratorium] < undifferentiated identity < foreclosure < achievement

Gr 6 [diffused diffusion = ruminative moratorium] < undifferentiated identity < [foreclosure = achievement]

The study revealed a similar configuration of groups with different identity statuses in the case of general satisfaction with life. Its level was the highest in participants with formed identity and the lowest in individuals with identity diffusion. However, effect size was low and equal to $\eta^2 = .12$.

Figure 8 presents the configurations of the variables measured in five subgroups of students with different identity statuses. The results showed that students with the *foreclosure* and *achievement* statuses – those who had completed their struggle with the identity crisis – had similarly high levels of

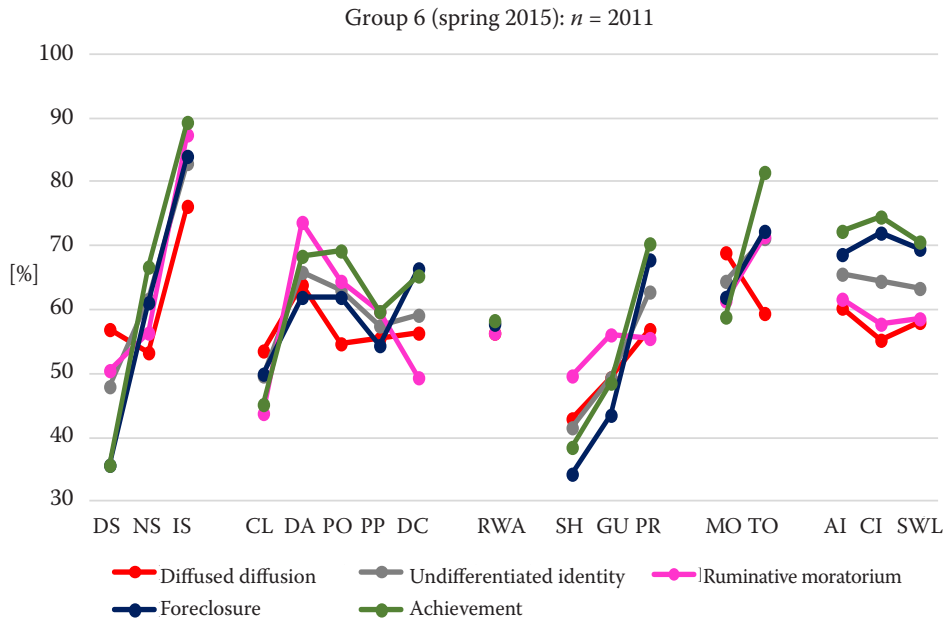


Figure 8. Profiles of students with different identity statuses in Group 6, tested in the second semester of school year 2014/2015.

Note. Styles of processing identity problems: DS – diffuse style; NS – normative style; IS – informational style; indicators of the need for cognitive closure: CL – closed-mindedness; DA – discomfort with ambiguity; PO – preference for order; PP – preference for predictability; DC – decisiveness; RWA – right-wing authoritarianism; self-conscious emotions: SH – shame; GU – guilt; PR – pride; life orientation: MO – moratorium orientation; TO – transitive orientation; identity capital indicators: AI – adult identity, and CI – community identity; SWL – general satisfaction with life

adult identity and community identity and a similarly high level of general satisfaction with life.

The students exhibiting a medium or high level of ruminative exploration (cf. Figure 2 – profiles for Group 6) – individuals with the statuses of *ruminative moratorium* and *diffused diffusion*, still in the phase of resolving identity crisis or preparing to resolve it – had higher levels of both social capital indicators as well as significantly lower satisfaction with life than individuals whose identity had already been formed. They also exhibited a diffuse style of processing identity problems and a relatively strong moratorium orientation – i.e., a relatively strong focus on the *here and now*. Moreover, they had the lowest sense of pride in the whole group.

Still, these analyses do not resolve what is the cause and what is the effect of a given state of affairs. A high sense of shame or guilt may be an “effect” (“product”) of a particular identity status. On the other hand, both of these emotions activate numerous doubts and may limit exploratory activities as well as narrow down the fields of independent decision making. This in turn may contribute to enhancing ruminative exploration and to an “inevitable” preference for a diffuse style of processing the information collected about oneself and about relations with others. In this way, a vicious circle mechanism is triggered off, which it is very difficult to stop on one’s own.

4.4. Findings

The aim of the first stage of the analysis of results – simple cross-sectional and complex time-sequential comparisons – was to answer the question of what characteristics of cognitive, emotional, and social functioning “accompany” the different identity statuses distinguished among the tested young people (Table 11). In testing the groups, we placed emphasis on different factors. Nevertheless, the comprehensive analysis of the obtained results made it possible to formulate certain general observations and preliminary conclusions, which were tested in the analyses performed in subsequent steps – in time-lag and cohort-sequential comparisons (cf. Chapter 6) as well as in longitudinal and cross-sequential comparisons (cf. Chapter 7).

Table 11 and Figure 9 present the values of effect size for the associations of all variables measured in the consecutively tested groups with the types of identity statuses. The values of the η^2 coefficient were the highest for the diffuse style of processing identity problems (.23 to .24), transitive life orientation (.19 to .32), and the second indicator of identity capital – namely, community identity (.22 to .23).

Table 11. Associations of Cognitive, Emotional, and Social Correlates With Identity Status (the values in each cell are as follows, top to bottom: F , p , and η^2)

Instrument and variables measured	Group 1		Group 2		Group 3		Group 4		Group 5		Group 6	
	Autumn 2012		Spring 2013		Autumn 2013		Spring 2014		Autumn 2014		Spring 2015	
Group and measurement time	$n = 1033$		$n = 1428$		$n = 2373$		$n = 2062$		$n = 2409$		$n = 2011$	
Identity style (ISI-4/PL)												
Diffuse style	77.42		89.10								157.51	
	.001		.001								$p < .001$	
Normative style	.23		.24								.24	
	19.04		22.68								41.82	
Informational style	.001		.001								$p < .001$	
	.07		.07								.08	
Informational style	34.15		46.73								61.67	
	.001		.001								$p < .001$	
Closed-mindedness	.12		.14								.11	
	Need for cognitive closure (NFC-5/PL)											
Discomfort with ambiguity	35.85										40.71	
	$p < .001$										$p < .001$	
Preference for order	.07										.08	
	46.55										46.55	
$p < .001$										$p < .001$		
.09												

Nonacceptance of emotional responses	9.85 .001 .04	21.20 .001 .07	1.22 <i>ns</i>
Impulse control difficulties	9.39 .001 .04	11.46 .001 .04	1.45 <i>ns</i>
Limited access to emotion regulation strategies	18.25 .001 .07	24.15 .001 .08	1.76 <i>ns</i>
Difficulties engaging in goal-directed behaviour	17.20 .001 .06	24.71 .001 .08	4.92 $p < .01$.07
Emotion regulation strategies (ERQ/PL)			
Cognitive reappraisal		15.18 $p < .001$.03	15.87 $p < .001$.03
Expressive suppression		1.30 <i>ns</i>	22.30 $p < .001$.04
		2.41 <i>ns</i>	2.41 <i>ns</i>
Shame rumination (SRS/PL)			
Shame rumination		55.92 $p < .001$.11	54.71 $p < .001$.10
			51.10 $p < .001$.08
Experience of dissociation (ADES-S/PL)			

Table 11. continuation

Amnesia	10.04 <i>p</i> < .001 .02	8.61 <i>p</i> < .001 .02	11.18 <i>p</i> < .001 .02
Depersonalisation	13.52 <i>p</i> < .001 .03	7.35 <i>p</i> < .001 .01	10.26 <i>p</i> < .001 .02
Life orientation and type of social participation (SPQ1-S)			
Moratorium orientation	24.05 .001 .09	29.69 .001 .10	23.07 <i>p</i> < .001 .05
Transitive orientation	99.18 .001 .28	131.26 .001 .32	174.08 <i>p</i> < .001 .26
Identity capital (ISRI/PL)			
Adult identity			30.10 <i>p</i> < .001 .05
Community identity			175.32 <i>p</i> < .001 .23
Satisfaction with life (SWLS/PL)			
General satisfaction with life			65.66 <i>p</i> < .001 .12

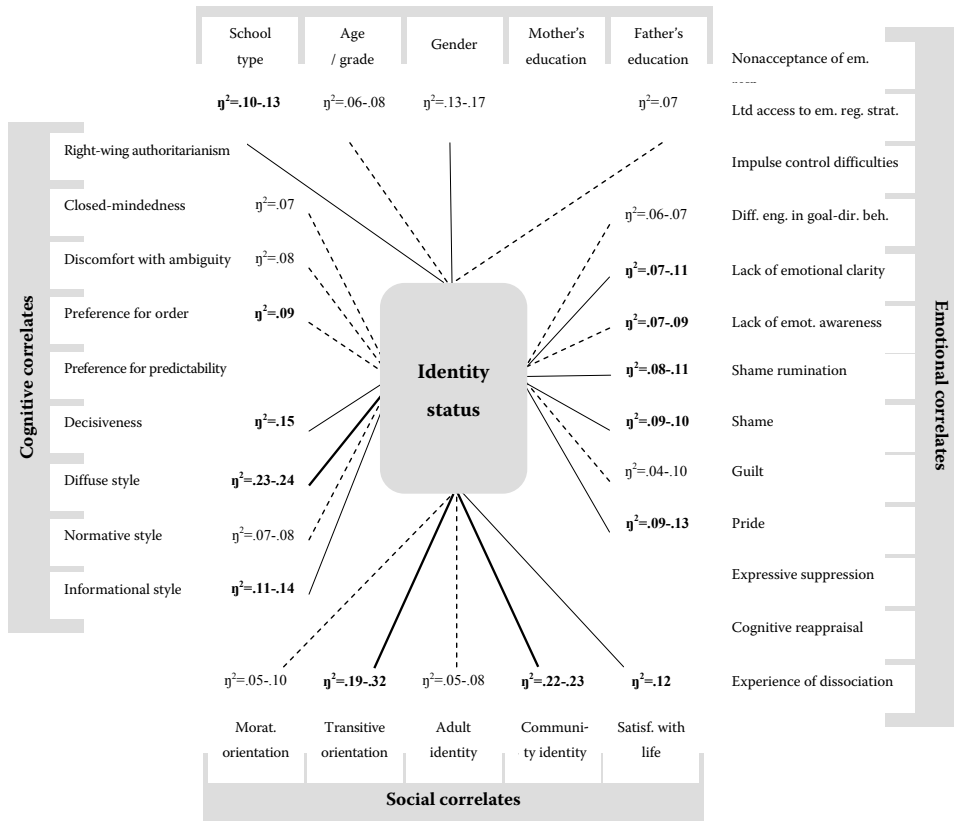


Figure 9. The significance of cognitive, emotional, and social correlates for the type of identity status (the results of cross-sectional and time-sequential analyses for the six comparison groups)

Further factors significantly differentiating participants with different identity statuses – though weakly and not to the same extent in every group – turned out to be the following:

- in the group of cognitive correlates: informational style of processing identity problems (.11 to .14) and decisiveness as one of the indicators of the need for cognitive closure (.15, but it was tested only in one group, and the scale has a low reliability coefficient of .61);
- in the group of emotional correlates: shame (.09 to .11) and pride (.09 to .13), as well as shame rumination (.08 to .11), low emotional awareness (.07 to .09), and lack of emotional clarity (.07 to .11);
- in the group of social correlates: moratorium life orientation (.05 to .10), the first indicator of identity capital – i.e., adult identity (.05 to .08) – and general satisfaction with life (.12).

5. Characteristics of Groups of Students with Different Identity Statuses

Based on the analyses performed, we drew up psychological profiles of students with different levels of identity formation (cf. Figure 1a and Figure 2). They amount to a kind of collective portrait, drawn up based on the analysis of the strongest statistical effects (Figure 9) in each of the six compared groups of students. It should be stressed that in all six groups (cf. Figure 1b) there are students in different phases of the process of struggling with identity crisis and looking for answers to questions concerning their place in life.

We performed a characterisation of three groups of students: (1) students with identity diffusion (precrisis phase), (2) students with identity moratorium (crisis phase), and (3) students with formed identity (postcrisis phase) in five steps, the same in each case, namely: *Who are they?*; *Identity status*; *Cognitive correlates*; *Emotional correlates*; *Social correlates*.

5.1. Identity diffusion

Who are they? Students in the first phase – the precrisis phase, when identity experience is in the process of accumulation – constituted between 13.4% and 33.4% of Groups 1-6; these tended to be younger students, regardless of gender, and students of schools with a general (comprehensive) curriculum (general and specialised upper secondary schools in vocational school complexes as well as independently functioning general upper secondary schools). In the whole tested sample (six groups), 22.6% of students represented this category.

Identity status. Their form of identity can be called “diffusion” due to the low or moderate level of both types of adaptive exploration (i.e., exploration in breadth and in depth), the relatively high level of ruminative exploration, connected with the experience of fears and doubts, and the low or very low level of both commitment-related dimensions of identity development: commitment making and identification with commitment. This group was not a homogeneous one. A small percentage of the participants had the status of *carefree diffusion* (5.9% of the total sample), with a medium level of ruminative exploration compared to other students, and a much larger proportion exhibited the status of *diffused diffusion* (16.7%), with a high level of ruminative exploration compared to other students.

Cognitive correlates. The diffuse (diffuse-avoidant) style of processing identity information (cf. description in Table 10 in Chapter 4) turned out to be the dominant one – the levels of its indicators were the highest in this particular

group of students. It was particularly strong in participants with the *diffused diffusion* status. This style is marked by postponing action, putting off attempts at solving problems, as well as reluctance to confront unpleasant situations and identity conflicts. However, a high level of diffuse style was often accompanied by informational style, consisting in actively looking for information related to the self. Also, students in this group scored low on two indicators of the need for cognitive closure significantly associated with the type of identity status. They exhibited a moderate level of certainty in making decisions compared to other students (indicator: *decisiveness*) and a low level of willingness to comply with principles and rules (indicator: *preference for order*).

Emotional correlates. The characteristic feature was a high sense of shame (especially in individuals with the status of *diffused diffusion*) and guilt and a low sense of pride. This was accompanied by a moderate level of shame rumination compared to other students – that is, by moderate experience of persistently recurring thoughts connected with this emotion. These students also experienced greater difficulties in emotion regulation, particularly in the areas of emotional clarity and emotional awareness.

Social correlates. Moratorium orientation, manifesting itself in a focus on the *here and now* and on the quick gratification of needs, was clearly stronger in this phase than in students in later phases of identity crisis resolution. Both indicators of identity capital were low: the sense of being an adult (adult identity) and the sense of having found one's place in the adult social world (community identity). General satisfaction with life was low as well.

5.2. Identity moratorium

Who are they? Students in the second phase – the crisis phase, when a person not only continues to accumulate experience concerning themselves, relations with other people, and the functioning of the social environment but also begins to actively use the already accumulated experience in order to cope with identity confusion – constituted from 39.4% to 49.4% of students in Groups 1-6. These were students of different ages – younger and older, attending different types of upper secondary schools. The largest group in this phase were students of general or specialised upper secondary schools in vocational school complexes and from general upper secondary schools that were not part of such complexes; technical upper secondary school students were slightly less numerous, and the smallest group were basic vocational school students. In the total sample (all six groups), 43.2% of the students represented the identity moratorium category.

Identity status. Identity “moratorium” can be described as emerging identity, in the process of taking a definite shape. A characteristic feature is a moderate or high level of all three types of exploration – orientation and search activities, more (exploration in breadth and in depth) or less (ruminative exploration) orderly and consciously directed towards a goal one has set oneself. The second characteristic feature is a low (though higher than in participants with identity diffusion) or medium level of both commitment-related dimensions of identity development: commitment making and identification with commitment. This group, just like the first one, was not homogeneous. A considerable proportion of students – the largest in the total sample (26.3%) – exhibited the status of *undifferentiated identity*, with a medium level of all identity dimensions compared to other subjects (cf. Figure 2 – “flat” profiles for the *undifferentiated identity* status, close to $z = 0$). This can be metaphorically called “identity in the waiting room.” The second subgroup, much smaller than the first (16.8%), was students with the status of *ruminative moratorium*, with a high level of all three forms of exploration (ruminative exploration being the dominant one) and a low level of both commitment-related dimensions. These individuals can be described as struggling with identity problems, groping about and seeking, sometimes persistently, and trying out, though often chaotically (as attested by the high level of ruminative exploration), rather than testing the correctness of their choices. What is interesting is that *undifferentiated identity* (“in the waiting room”) was found in a similar number of men and women, whereas the status of *ruminative moratorium* (“trying out and groping about”) was more frequent in women.

Cognitive correlates. Students with identity moratorium used all three styles of cognitive processing of identity problems, though informational and normative styles were more frequent. What is interesting, the level of informational style in participants with the *ruminative moratorium* status was similar to that found in people with formed identity – with the status of *achievement*. As regards the indicators of the need for cognitive closure, of all the students tested, the level of *discomfort with ambiguity* was the highest and the level of *decisiveness* the lowest in participants with the status of *ruminative moratorium*.

Emotional correlates. The sense of shame and the sense of guilt were moderate, but higher in subjects with the status of *ruminative moratorium* than in those with *undifferentiated identity*. The sense of pride, in contrast, was higher in individuals with the *undifferentiated identity* status. The level of shame rumination was fairly high in both groups.

Social correlates. Both identity moratorium and transitive identity were moderate. The former was significantly lower than in subjects with identity diffusion and significantly higher than in individuals with formed identity. In

the case of transitive orientation, the situation was exactly the reverse. The configuration of scores was similar for the two indicators of identity capital, which confirms that people with identity moratorium are halfway from identity diffusion to identity crisis resolution. As regards the general satisfaction with life, it was low in students with the *ruminative moratorium* status, and its level was similar to that found in individuals with *diffused diffusion* (in both cases there was a high level of ruminative exploration, which may significantly decrease satisfaction with life), while in participants with *undifferentiated identity* it was significantly higher. In both cases, however, the level of satisfaction with life was significantly higher than in participants with formed identity (after crisis).

5.3. Formed identity

Who are they? Students in the third, postcrisis phase, when certain identity decisions had already been made on the basis of the previously accumulated experience (*who do I want to be?, what do I want to do?, what is my place in the world?*), constituted from 27.2% to 37.2% of subjects in the compared Groups 1-6; they tended to be older students and those attending schools with vocational curricula. Such students constituted 34.2% of the total sample (all six groups).

Identity status. The identity of these students can be described as “formed” or “shaped” due to the high levels of both commitment-related dimensions of identity: commitment making and identification with commitment. This group was the most heterogeneous one. Its first subgroup is 16.2% of students, more often male than female, more often attending basic vocational schools than technical or specialised/general upper secondary schools, and when the latter are considered – more often from vocational school complexes than from independently functioning general upper secondary schools. Their identity status can be described as *foreclosure* – its characteristic feature is the low level of exploratory behaviour, particularly ruminative exploration. The second subgroup is the 18% of students with the *achievement* status – in this case, neither gender nor the type of school were significant. The characteristic feature was balance between exploratory processes (exploration in breadth and in depth) and commitment processes – the level of both being high. In contrast, the level of ruminative exploration was low, just like in participants with the *foreclosure* status (cf. Figure 2). Interestingly, the level of ruminative exploration, though similar in the two subgroups, was significantly higher in the one with the *achievement* status. This status can be regarded as the most mature and conducive to development, and the existing doubts and fears (symptoms

of ruminative exploration) can be treated as one of the factors motivating the individual to engage in further exploration and thereby to develop.

Cognitive correlates. Participants with formed identity had the lowest levels of diffuse style in the whole sample, similar in both subgroups (*foreclosure* and *achievement*). What differentiated them was the normative style. Participants with the *achievement* status used it more often, while participants with the *foreclosure* status exhibited a much lower level of this style, as did also individuals with identity moratorium. The scores on informational style are interesting. Students with the statuses of *achievement* and *ruminative moratorium* scored similarly high, though individuals with statuses so different as those two seek identity information for different purposes. Participants with the *foreclosure* status scored considerably lower on informational style, and participants with the *undifferentiated identity* status and with identity diffusion scored lower still.

Emotional correlates. Shame was low and the sense of guilt was moderately low; in both cases, the scores were significantly lower in participants with the status of *foreclosure* than in those with the *achievement* status. Also shame rumination was considerably lower in individuals with the *foreclosure* status, while the level of pride was similarly high in both groups of students. The highest level of emotional awareness was found in participants with the *achievement* status. Students with the *foreclosure* status were very similar in this respect to students with identity moratorium.

Social correlates. The two subgroups were similar in terms of the level of moratorium orientation, whereas transitive orientation – high in both subgroups – was significantly higher in students with the *achievement* status. Also high in both subgroups were both indicators of identity capital; students with the *achievement* status had a significantly higher level of adult identity than students with the *foreclosure* status and, like them, a high level of community identity. Both subgroups exhibited a similar high level of general satisfaction with life.

6. Concluding Remarks

The above descriptions only indicate the main tendencies relating to the associations between identity status type and selected psychological variables. This kind of “collective portrait” inevitably blurs the differences connected with interactions of psychological factors with one another as well as with the participants’ age and gender or with the type of schools they attended. It is

therefore not possible on its basis to formulate detailed guidelines for teachers or form tutors from various types of schools or for students at different ages.

Its unquestionable advantage, however, is the fact that it shows how much diversity there is among young people at the threshold of adulthood, both within-group (interindividual differences within each group) and between-group (differences connected with the time of measurement during the school year, in three consecutive years). Analyses revealed that these differences stemmed from factors such as school type, age, gender, or both parents' education level to a small extent only; they stemmed to a much greater extent from the overall configuration of psychological factors. On the one hand, this configuration is the background for the process of identity formation; on the other, it is the outcome of this process.

AGE OR COHORT EFFECT? ANALYSIS OF THE RESULTS OF TIME-LAG AND COHORT-SEQUENTIAL COMPARISONS



1. Introduction

The analyses performed in this chapter concern students starting the first grade of upper secondary schools in three consecutive years. These analyses were supposed to answer the question of how similar first-grade students were to one another within a given year and how similar or dissimilar the consecutive years of students were to one another. Comparisons were carried out on three sets of data, collected from first-grade students commencing their education in different types of upper secondary schools in three consecutive school years, namely: 2012/2013, 2013/2014, and 2014/2015. Each cohort was tested twice during the school year – at the beginning of the first semester and towards the end of the second semester.

Comparisons in which the subjects are at the same age but belong to groups (cohorts) that differ from another for some reason – in this case, to consecutive years of first-grade students – are known as sequential design (Schaie & Strother, 1968; cf. Bee, 2004). They consist in collecting and analysing data from at least two distinct groups of subjects at two or more different moments in time. In the present study there were three groups of students, each of them tested at a different time (in three consecutive school years), though always at the beginning and towards the end of a given school year.

The research design was complex. On the one hand, it included simple time-lag comparisons, answering the question of what differences, if any, there were between first-grade students – i.e., between students at the same or similar age but from different cohorts (consecutive years). On the other hand,

the adopted research design made it possible to perform complex time-lag-and-longitudinal analyses – namely, cohort-sequential ones – answering the question of whether the pattern of changes (longitudinal design: comparisons of results obtained in the first and second measurements) was similar across cohorts tested at different times (time-lag design). This complex design is illustrated in Figure 1.

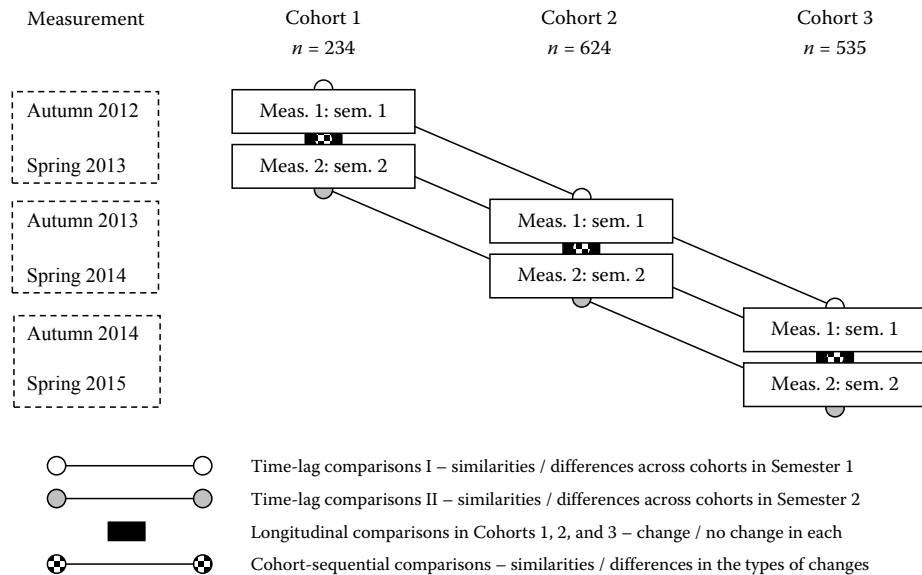


Figure 1. The design of time-lag comparisons (2 times) and cohort-sequential comparisons (three cohorts of first-grade students).

The aim of the comparisons was, firstly, to answer the question of whether the pattern of results in the form of the identified types of identity status as well as their associations with the type of school, gender, both parents' education level, and the psychological variables measured was similar or different across the compared groups of first-grade students (individuals in the same age bracket) from different cohorts (consecutive years). This answer was given separately for the results of the first and second measurements (time-lag comparisons I and II, respectively – see Fig. 1).

The second aim was to answer the question of whether the character of changes that occurred over the school year in the course of the first grade in each cohort (three longitudinal comparisons – Fig. 1) was the same in each of the three compared years (cohort-sequential comparisons). These changes refer to progressive or regressive transformations of the identity statuses that

the students had when beginning the first-grade and to the role of contextual and psychological factors in these transformations.

Both in the former case (similarity of the pattern of dimensions of identity development and its correlates in the first and second measurements) and in the latter case (similarity of the pattern of changes over the school year), similarity across the three cohorts would indicate a significant role of factors connected with the specificity of the process of growing up – in other words, it would indicate a certain repeatability of the pattern of development stemming from relative “immunity” to external factors. Differences, by contrast, would indicate a significant role of environmental factors, including sociocultural and educational ones, connected with the main habitats of development – family and school, and perhaps factors that are distinct and specific to each of the compared cohorts.

Table 1 presents the instruments used to test the three cohorts of first-grade students. The investigators tested each cohort in both semesters of the school

Table 1. Instruments Used to Test First-Grade Students From Three Consecutive Years

Instruments used: name and measured area		Cohort 1		Cohort 2		Cohort 3	
		school yr 2012/2013		school yr 2013/2014		school yr 2014/2015	
		Sem. 1	Sem. 2	Sem. 1	Sem. 2	Sem. 1	Sem. 2
DIDS/PL	identity dimensions and status	x	x	x	x	x	x
ISI-4/PL	styles of processing identity problems	x	x				x
NFC-S/PL	need for cognitive closure						x
RWAPL	right-wing authoritarianism						x
PFQ-2/PL	shame, guilt, and pride	x	x	x	x	x	x
DERS/PL	difficulties in emotion regulation	x	x				
ERQ/PL	emotion regulation strategies			x	x	x	
SRS/PL	shame rumination			x	x	x	
ADES-S/PL	experience of dissociation			x	x	x	
SPQ1-S	life orientation and type of social participation	x	x		x		x
ISRI/PL	identity capital					x	x
SWLS/PL	general satisfaction with life						x

Note. Grey colour indicates areas of longitudinal comparisons within one cohort.

year using DIDS/PL, a questionnaire measuring the levels of dimensions of identity development and making it possible on the basis of their configuration to identify the type of identity status. The other instrument administered to each cohort in both semesters was PFQ-2/PL, a questionnaire measuring the intensity of three self-conscious emotions that are particularly important in adolescence: shame, guilt, and pride. The remaining instruments were administered to selected cohorts.

The results of sequential analyses are of importance particularly to the process of pedagogical protodiagnosis and professional psychological assessment of students' resources at the time of beginning a new school and, consequently, to the planning of directions and methods of educational and preventive interventions to support their development in the coming years of school education – in the last period of their life before entering adulthood.

2. Identity Statuses of Students Beginning and Completing the First Grade of Upper Secondary School and Their Correlates

The first stage of the analysis of first-grade students' scores was meant to answer the question of what identity status they begin and complete the first grade with. For this purpose, I compared the types of identity status identified in the groups of students tested in the first semester and then again in the second semester in three consecutive school years.

2.1. A comparison of identity statuses across cohorts at the beginning of Grade 1

Figure 2a presents the identity statuses identified among first-grade students in three cohorts (autumn 2012/2013, autumn 2013/2014, and autumn 2014/2015) in the first semester of the upper secondary schools they were beginning to attend. In Cohort 1 there were only students from vocational school complexes (VSC; $n = 234$) – from the three types of schools they comprised: basic vocational schools (BVS), technical upper secondary schools (TEC), and specialised upper secondary schools or general ones with specialised or general-curriculum classes (SGC); in the second and third cohorts, additionally, there were students of general upper secondary schools (GEN, not part of VSC); the total number of students was $n = 624$ in Cohort 2 and $n = 535$ in Cohort 3).

The comparison of the number of statuses identified and the number of students characterised by these statuses shows that the three cohorts differed

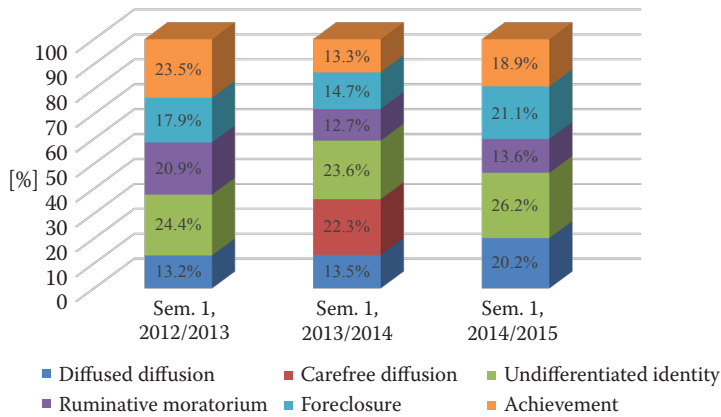


Figure 2a. Identity statuses identified in the three cohorts of first-grade students in the first semester of study

from one another. Only the percentages of students with *undifferentiated identity* were similar in all three groups (24.4%, 23.6%, and 26.2%, respectively). The status of *ruminative moratorium* occurred more frequently in Cohort 1 (20.9%) and *diffused diffusion* in Cohort 3 (20.2%), while in Cohort 2 (and only in that one) there was a considerably large group of students with the status of *carefree diffusion* (22.3%). The analysis of the frequency of identity statuses revealed high internal diversity of the cohorts and at the same time large differences between them.

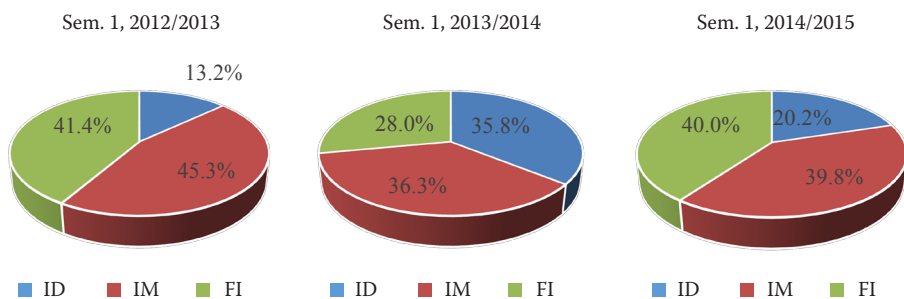


Figure 2b. Proportions of students with different degrees of identity formation in Semester 1 of the first grade

Note. ID – identity diffusion; IM – identity moratorium; FI – formed identity

This finding – low similarity across the cohorts – is confirmed by the analysis of statuses in terms of the degree of their formation (Figure 2b). In

each cohort there is a different proportion of the number of students with immature, still unformed statuses – identity diffusion (ID) and moratorium (IM) – to the number of students with mature, already formed statuses (FI). Such different proportions between students with different degrees of identity formation (maturity) show that we are dealing with three strongly qualitatively different groups of students despite the fact that they were tested at the same (or very similar) age.

2.2. A comparison of identity statuses across cohorts at the end of Grade 1

We performed a similar analysis for the results of measurements carried out towards the end of the first grade. Its results are presented in Figures 3a and 3b. There is an observable change in comparison with the results obtained for the first semester, since all three compared groups are more similar to one another than in Semester 1, although the differences between them remain fairly large. In all three groups there are very similar percentages of students with the statuses of *undifferentiated identity* (23.5%, 26%, and 25.6%, respectively) and *ruminative moratorium* (15.4%, 15.2%, 15.7%). Proportions are similar in the case of other identity statuses, too – this refers especially to Cohorts 1 and 2 (see Figure 3a). To some extent, this effect of the compared cohorts becoming more similar to one another can be attributed to their having similar duties to do, similar school regulations to follow, and similar teachers' and peers' expectations to meet.

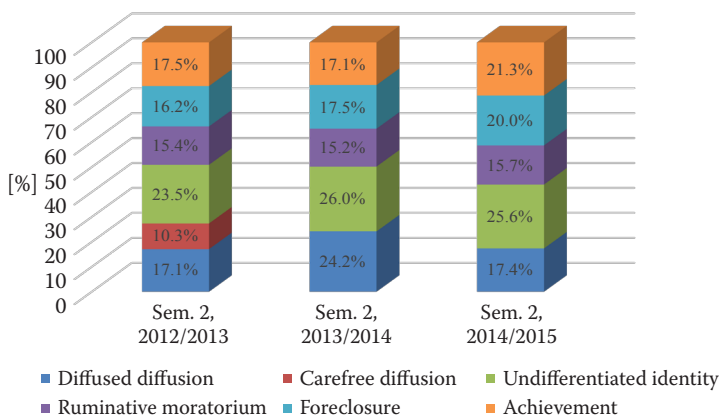


Figure 3a. Identity statuses identified in the three cohorts of first-grade students in the second semester of the school year

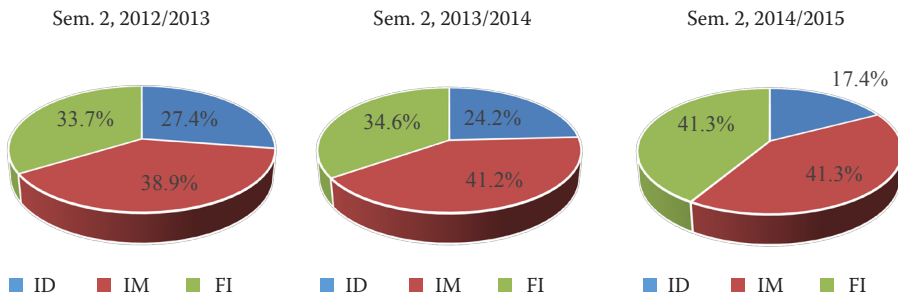


Figure 3b. Proportions of students with different degrees of identity formation in Semester 2 of the first grade

Note. ID – identity diffusion; IM – identity moratorium; FI – formed identity

A more detailed analysis, however, shows that these are not positive changes. This tendency is particularly visible in Cohort 1, in which there was a twofold increase compared to the first semester in the number of students with the least mature statuses – identity diffusion (from 13.2% to 27.4%), experiencing identity confusion, still (or again, which refers to about a half of the students in this group) in the precrisis phase, and a decrease, though not very large, in the number of students with moratorium statuses (from 45.3% to 38.9%), still struggling with identity crisis but at least having a chance to resolve it positively. The number of students with formed identity statuses decreased as well (from 41.3% to 33.7%).

The three compared groups are very similar in terms of the proportion of students with moratorium identity statuses (Figure 3b: 38.9%, 41.2%, and 41.3%, respectively) and differ in the proportion of students with the least mature, identity diffusion statuses (27.4%, 24.2%, and 17.4%) and with formed identity statuses (33.7%, 34.6%, and 41.3%); the percentages of students with the *foreclosure* and *achievement* statuses (Figure 3a) are similar across the cohorts. Thus, as in the first semester, there is still a considerable qualitative diversity of students' identity statuses in each cohort (large intragroup differences) and between the cohorts (intergroup differences), which again provokes the question of the quality of developmental and educational offers or the quality of their realisation in first grades in the schools tested.

2.3. Contextual determinants of identity statuses

An important question concerned the determinants of the types of identity status, particularly the differences connected with gender, the type of upper

secondary school, and both parents' education levels. The analysis performed for the results obtained both at the beginning and at the end of the first grade showed, firstly, that these were not very significant factors, and secondly, that the cohorts differed also in this respect. Table 2 presents the results of statistical analyses using the χ^2 test and Cramér's V strength of association coefficient. In all situations when the value of the V coefficient was statistically significant, it ranged between .12 and .20, which means the analysed associations of a given determinant with the type of identity status were rather weak.

Table 2. Strength of Associations Between Contextual Factors and the Type of Identity Status

School yr	2012/2013		2013/2014		2014/2015	
Cohort	1		2		3	
Semester	Semester 1	Semester 2	Semester 1	Semester 2	Semester 1	Semester 2
Measurement	T1	T2	T1	T2	T1	T2
Number of students	$n = 234$	$n = 234$	$n = 624$	$n = 624$	$n = 535$	$n = 535$
School	$\chi^2 (8) = 19.43$ $p < .05$ Cramér's $V = .20$	$\chi^2 (10) = 17.05$ $p < .05$ Cramér's $V = .19$	$\chi^2 (15) = 68.16$ $p < .001$ Cramér's $V = .19$	ns	$\chi^2 (12) = 50.68$ $p < .001$ Cramér's $V = .18$	ns
Gender	ns	ns	$\chi^2 (5) = 22.84$ $p < .001$ Cramér's $V = .19$	$\chi^2 (4) = 21.99$ $p < .001$ Cramér's $V = .19$	ns	$\chi^2 (4) = 12.27$ $p < .05$ Cramér's $V = .15$
Mother's education	ns	ns	ns	ns	ns	ns
Father's education	ns	ns	$\chi^2 (15) = 25.48$ $p < .001$ Cramér's $V = .12$	ns	ns	ns

As expected, the most significant determinant turned out to be the type of school, although it was not as strongly related to identity statuses as we predicted it would be. This variable was significantly and systematically but weakly (Cramér's V ranging from .18 to .20) associated with how many statuses and what statuses were identified in the compared groups of students. It was a significant determinant in Cohort 1 in both measurements and in Cohorts 2 and 3 only in the first measurement (Semester 1). Cross-sectional analyses (see Chapter 5, Table 4) yielded Cramér's V values of .10 to .16 for the association between the type of school and the type of identity status.

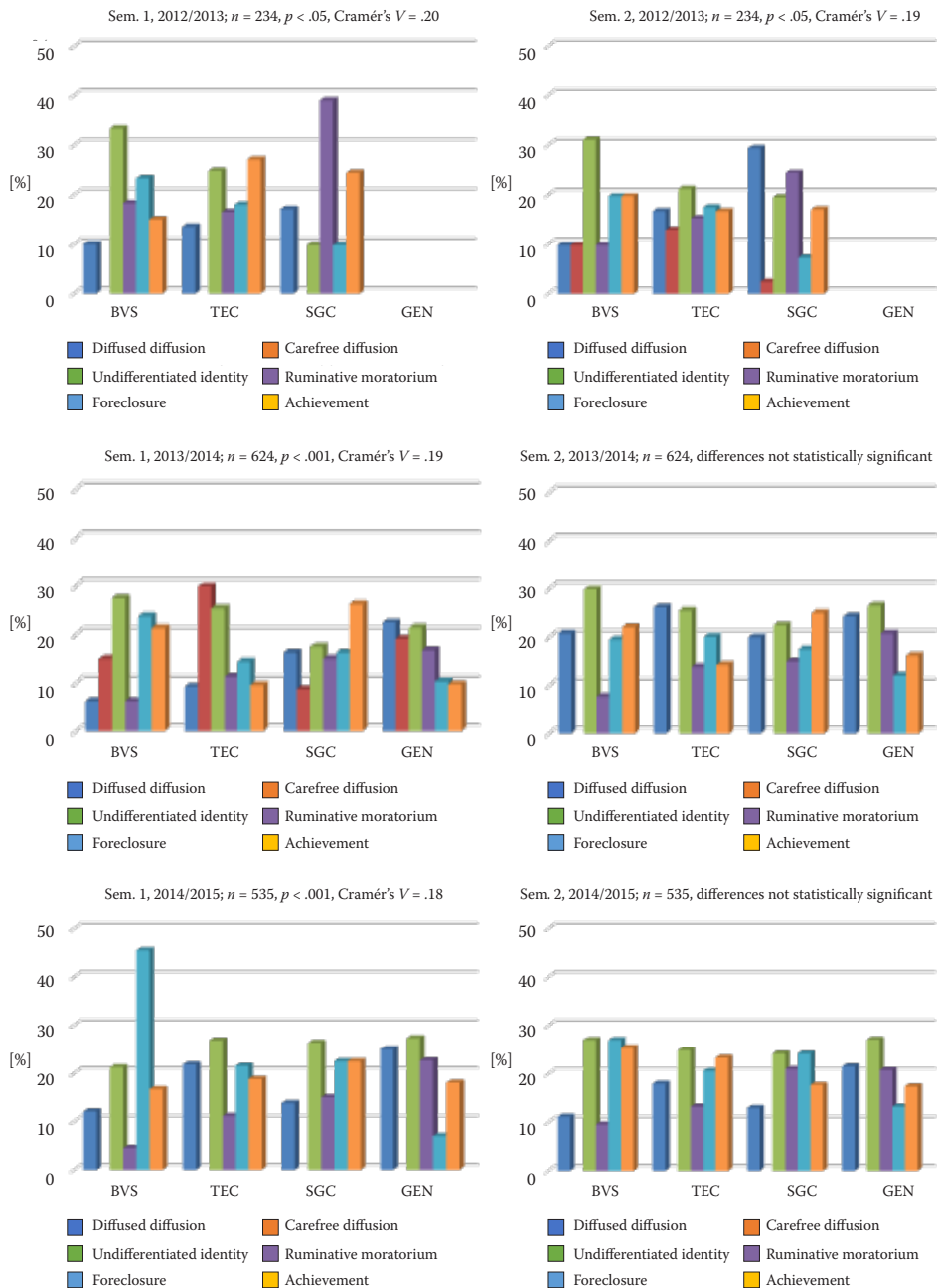


Figure 4. Identity statuses of first-grade students of different types of schools at the beginning (left) and towards the end (right) of a given school year

The analysis of the identity statuses of first-grade students from different types of schools yielded interesting findings (Figure 4). This factor (school type) turned out to be particularly important in the first semester in all cohorts, and in the second semester only in the case of the vocation-oriented environment: vocational school complexes – that is, in the first cohort.

The comparison of the identity statuses of first-grade students from vocational school complexes tested in school year 2012/2013 shows that there was a much larger percentage of students with *undifferentiated identity* in basic vocational schools than in technical and specialised or general upper secondary schools in VSCs. As regards specialised or general upper secondary schools that were part of vocational school complexes, considerably more students attending them had the status of *ruminative moratorium*, though their number was markedly lower towards the end of the first grade than at the beginning. It is also worth noting the clearly smaller number of students with formed identity statuses in general upper secondary schools (GEN, not part of VSCs) at the start of school (Semester 1 in school years 2013/2014 and 2014/2015) compared to schools representing the remaining three types (BVS, TEC, and SGC, all of them functioning in VSCs; all three may be thought of as having vocational curricula, though this is actually debatable in the case of SGC).

Perhaps this confirms the observation that upper secondary school with different curricula are not only chosen by children of parents with different levels of education (cf. Chapter 4, section 4.7. *Parents' education and the chosen type of upper secondary school*), but also by teenagers with different personality (identity) profiles developed in the previous stage: early adolescence – when attending primary and lower secondary (middle) school.

Moreover, schools with vocational curricula probably cope less effectively with pedagogical tasks, either because this is not what they regard as their mission in education or because they are not adequately prepared (psychological and pedagogical help at school, support from psychological and pedagogical counselling centres, and the training of form teachers), and with the psychosocial diversity of students. Their development-supporting interventions are less adequate to the students' needs due to their vocational orientation. This finding is confirmed by the fact that the differentiating effect of school type continues into the second semester in Cohort 1, consisting only of students from vocational school complexes.

Gender turned out not to be significant in the first cohort, composed only of students from schools with vocational curricula (functioning in the vocation-oriented environment of VCSs). It was significant, by contrast, in both measurements in the second cohort (Cramér's V was .19 in both cases) and only in the second measurement in the third cohort (Cramér's $V = .15$).

For comparison, in cross-sectional analyses these values ranged from .13 to .17 (significance in four out of six groups – Table 4 in Chapter 5).

In Cohorts 2 and 3 (Table 3), composed of students from schools with vocational curricula and general upper secondary schools, analysis reveals a very similar configuration of identity status types for women and for men towards the end of the first grade (T2 measurements). Women in both cohorts (in the second measurement) more often exhibited the statuses of *undifferentiated identity* and *ruminative moratorium*, while men more often exhibited the *foreclosure* status.

Table 3. Gender as a Factor Differentiating Identity Statuses

Cohort School year	Identity statuses					
	Diffused diffusion	Carefree diffusion	Undiffer- entiated identity	Ruminative moratorium	Fore- closure	Achieve- ment
1 2012/2013	No significant gender differences in Measurement 1 and in Measurement 2					
	Measurement 1 (Cramér's $V = .19$)					
women	17.0%	16.7%	26.1%	15.4%	11.8%	13.1%
2 2013/2014	Measurement 2 (Cramér's $V = .19$)					
women	22.9%	0.0%	28.7%	17.7%	11.0%	19.7%
men	25.5%	0.0%	23.2%	12.7%	23.9%	14.6%
3 2014/2015	Measurement 2 (Cramér's $V = .15$)					
women	15.9%	0.0%	27.2%	19.6%	15.6%	21.7%
men	18.9%	0.0%	23.9%	11.6%	24.7%	20.8%

Father's education was significant only in Cohort 2 in the first measurement (Cramér's $V = .12$; Table 2). In cross-sectional analyses, father's education was significant in only one of the six compared groups (Cramér's $V = .07$; Table 4 in Chapter 5). By contrast, mother's education turned out not to be significant to the type of the student's identity status (just like in the cross-sectional comparisons of six groups of students), and this is the only resemblance between the compared cohorts of first-grade students.

The fact that parents' education did not turn out to be a factor systematically associated with the type of identity status in first-grade students may, among other reasons, stem from the fact that parents' education level is not particularly differentiated within any type of school. The analysis of results in

terms of parents' education in all the groups we tested showed that children of parents with primary and vocational education more often chose schools with vocational curricula than comprehensive ones, whereas the tendency among children of parents with secondary and higher education was the opposite. The association of parents' education with the chosen type of school was significant, though weak, and similar in strength in the case of mothers (Cramér's V ranging from .18 to .22) and fathers (Cramér's V from .15 to .18).

A comparison of the results of analyses presented in Table 2, for all T1 measurements (performed in the first semester) and for all T2 measurements (performed in the second semester) reveals a lack of any systematic pattern of associations between the analysed contextual factors and the type of identity status. Thus, again, we found that despite the similar age (students at the same level of education) we are dealing with three groups (cohorts) of students qualitatively different not only in terms of the proportions of identity statuses in each cohort but also in terms of their contextual determinants.

3. Changes of Identity Statuses in Three Cohorts

3.1. Cohort 1: First-grade students in school year 2012/2013

The results (Figure 5a) show that in Cohort 1 a significant change occurred during the school year ($n = 234$, $\chi^2(20) = 159.52$, $p < .001$, Cramér's $V = .41$) – there was a considerable increase in the diversity of students in terms of identity status. Firstly, there appeared a small group of people ($n = 24$, 10.3%) with the *carefree diffusion* status, and the number of students with the least mature status – *diffused diffusion*, experiencing so-called identity confusion – increased (from 31 to 40 – that is, from 13.2% to 17.1%). Secondly, the size of the group with the status of *ruminative moratorium* decreased (from 49 to 36 – from 20.9% to 15.4%). Thirdly, there was a decrease (from 55 to 41 – from 23.5% to 17.5%) in the number of participants with the status of identity *achievement*, and this was the largest quantitative change.

Nearly all of these changes were regressive, which means a considerable proportion of the students “fell” to the positions of a less mature, less formed identity status and that doubts and fears concerning their own future appeared again. The above conclusions find support in the analysis of the directions of change, depicted in Table 4. The grey fields in the table show the number and proportion of participants with the same identity status in the first and second measurements: no change occurred in them over the first year. Approximately half of the students in each subgroup with a particular identity status experi-

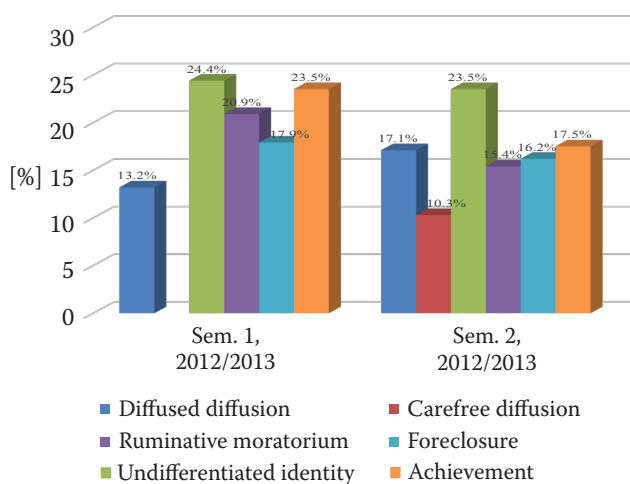


Figure 5a. Identity statuses of first-grade students in school year 2012/2013: Semesters 1 and 2

enced no change. The exception is the participants with the status of *ruminative moratorium* – only in 17 out of 49 of them (35%) the initial status did not change. Moreover, as many as 51% of the participants in this group changed their status to a less formed one (regressive change): to *undifferentiated identity* (20%) or *diffused diffusion* (31%).

The values in Table 4 that are to the right of the grey field in each row show the number of participants who experienced progressive changes, towards increasingly formed identity statuses, while those to the left of the grey field indicate the number of students who experienced regressive changes, towards unformed identity. As can be seen, regressive changes occurred in a much larger number of participants than progressive ones (cf. Figure 5b). The only marked progressive change – towards formed identity – was the transition of nine students from *undifferentiated identity* at the beginning to *achievement* near the end of the school year, though this particular change can hardly be regarded as fully positive. This is because the status of identity *achievement* or *conferral* is characterised by a low level of exploratory activity accompanied by high levels of commitment making and identification with commitment. In this case, students can be said to have resolved identity crisis by adopting certain values and ready solutions from the environment (from significant others) rather than by engaging in their own explorations and independent decisions.

Thus, in the first cohort of first-grade students it was mainly regressive changes that occurred over the first year of study. Many of them failed to

Table 4. Changes of Identity Statuses: Cohort 1 (2012/2013)

Identity status: T1 measurement	Identity status: T2 measurement						Total % of n_{tot}
	Diffused diffu- sion	Carefree diffu- sion	Undiffer- entiated identity	Ruminative morato- rium	Fore- closure	Achieve- ment	
Diffused diffusion	$n = 15$ 48.4%	$n = 10$ 32.3%	$n = 2$ 6.5%	$n = 3$ 9.7%	$n = 1$ 3.2%	$n = 0$ 0%	$n = 31$ 13.2%
Undifferentia- ted identity	$n = 7$ 12.3%	$n = 7$ 12.3%	$n = 23$ 40.4%	$n = 5$ 8.8%	$n = 9$ 15.8%	$n = 6$ 10.5%	$n = 57$ 24.4%
Ruminative moratorium	$n = 15$ 30.6%	$n = 1$ 2%	$n = 10$ 20.4%	$n = 17$ 34.7%	$n = 1$ 2%	$n = 5$ 10.2%	$n = 49$ 20.9%
Foreclosure	$n = 1$ 2.4%	$n = 5$ 11.9%	$n = 11$ 26.2%	$n = 0$ 0%	$n = 20$ 47.6%	$n = 5$ 11.9%	$n = 42$ 17.9%
Achievement	$n = 2$ 3.6%	$n = 1$ 1.8%	$n = 9$ 16.4%	$n = 11$ 20%	$n = 7$ 12.7%	$n = 25$ 45.5%	$n = 55$ 23.5%
Total % of n_{tot}	$n = 40$ 17.1%	$n = 24$ 10.3%	$n = 55$ 23.5%	$n = 36$ 15.4%	$n = 38$ 16.2%	$n = 41$ 17.5%	$n_{tot} = 234$ 100%

$\chi^2(20) = 159.52, p < .001, \text{Cramér's } V = .41$

maintain the identity status they had started the school with. As shown in Table 3 and Figure 5b, there are as many as 87 (37.1%) students in this cohort who “squandered” their initial capital in some way, 75 (32.1%) whose identity status did not change, and 47 (20.1%) whose changes can be regarded as development. Moreover, 25 out of 55 students with the formed identity status of *achievement* in the first measurement (10.7% of the whole group of 234 students) maintained their initial status of formed identity. Thus, of the whole group, tested twice, as many as 69.2% of students experienced developmentally negative changes during the first year of study and only 30.8% of students exhibited developmentally positive changes (progressive changes or maintenance of the status of identity *achievement*).

3.2. Cohort 2: First-grade students in school year 2013/2014

In Cohort 2, the change in terms of identity statuses that took place during the school year was significant ($\chi^2(20) = 542.81, p < .001, \text{Cramér's } V = .47$), as in Cohort 1, but the character of the changes was different. In the second measurement (Figure 6a) there were no longer any students with the status of *carefree diffusion*, and this was probably one of the reasons why a significant increase occurred in the number of participants with the status of *diffused*

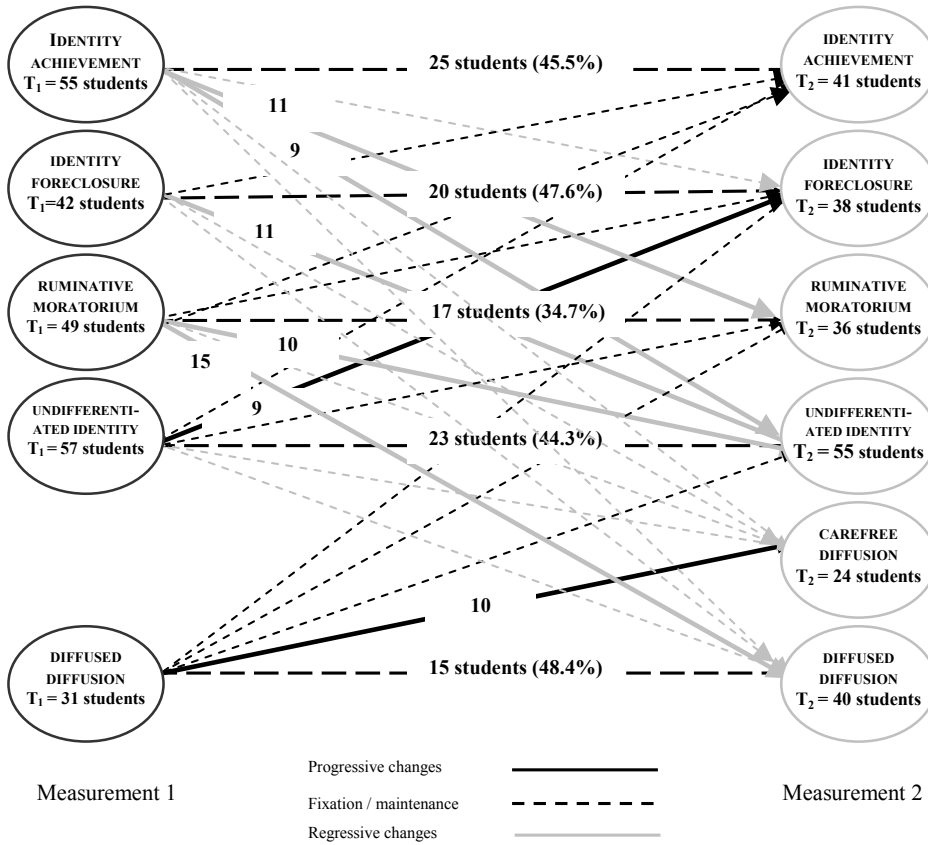


Figure 5b. Changes of identity statuses in first-grade students in school year 2012/2013

diffusion (from 84 to 151 students – from 13.5% to 24.2%), who are individuals with the highest sense of identity confusion. Small changes also occurred in the remaining identity statuses. Importantly, there was a slight increase in the number of students with formed identity statuses, which is a positive change.

The analysis of the directions of change, presented in Table 5, reveals that slightly fewer than a half of the students with the less mature statuses – *diffused diffusion* (46.4%), *undifferentiated identity* (48.3%), and *ruminative moratorium* (43%) – maintained them, as in Cohort 1. For comparison, in both groups with formed identity, about 60% of the students maintained their initial statuses (*foreclosure*: 63%, *achievement*: 57.8% – compared to 47.6% and 45.5%, respectively, in Cohort 1).

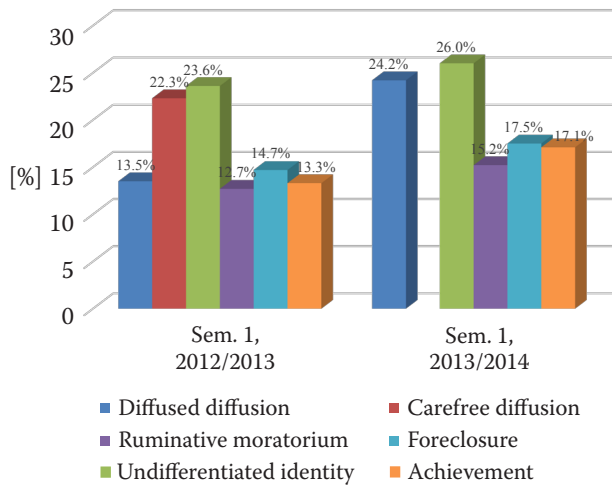


Figure 6a. Identity statuses of first-grade students in school year 2013/2014: Semesters 1 and 2

Table 5. Changes of Identity Statuses: Cohort 2 (2013/2014)

Identity status: T1 measurement	Identity status: T2 measurement					Total % of n_{tot}
	Diffused diffusion	Undifferentiated identity	Ruminative moratorium	Foreclosure	Achievement	
Diffused diffusion	$n = 39$ 46.4%	$n = 6$ 7.1%	$n = 38$ 45.2%	$n = 1$ 1.2%	$n = 0$ 0%	$n = 84$ 13.5%
Carefree diffusion	$n = 74$ 53.2%	$n = 36$ 25.9%	$n = 7$ 5%	$n = 19$ 13.7%	$n = 3$ 2.2%	$n = 139$ 22.3%
Undifferentiated identity	$n = 12$ 8.2%	$n = 71$ 48.3%	$n = 12$ 8.2%	$n = 18$ 12.2%	$n = 34$ 23.1%	$n = 147$ 23.6%
Ruminative moratorium	$n = 13$ 16.5%	$n = 25$ 31.6%	$n = 34$ 43%	$n = 0$ 0%	$n = 7$ 8.9%	$n = 79$ 12.7%
Foreclosure	$n = 12$ 13%	$n = 6$ 6.5%	$n = 1$ 1.1%	$n = 58$ 63%	$n = 15$ 16.3%	$n = 92$ 14.7%
Achievement	$n = 1$ 1.2%	$n = 18$ 21.7%	$n = 3$ 3.6%	$n = 13$ 15.7%	$n = 48$ 57.8%	$n = 83$ 13.3%
Total % of n_{tot}	$n = 151$ 24.2%	$n = 162$ 26%	$n = 95$ 15.2%	$n = 109$ 17.5%	$n = 107$ 17.1%	$n_{tot} = 624$ 100%

$\chi^2 (20) = 542.81, p < .001, \text{Cramér's } V = .47$

Figure 6b depicts many significant progressive changes. These changes occurred in a total of 196 students (31.4%). The identity status from the first measurement was maintained by 202 students (32.4%), while regressive change – a change of status to a lower one than in the first measurement – occurred in 178 students (28.5%). Additionally, 48 (57.8%) of the 83 subjects with identity *achievement* at T1 maintained this status by T2.

Overall, progressive changes and maintenance of the identity *achievement* status were the case in 244 students (39.1%), while regressive changes and no change occurred in 380 students (60.9%). What is disturbing in this group is the number of participants in the least mature category – identity diffusion – in the second measurement (151 students, constituting 24.2% of the whole tested group, which is nearly two times more than in the first measurement). In the second measurement, there were also 12 individuals in this cohort with identity already formed (with the *foreclosure* status) at the time of the first measurement.

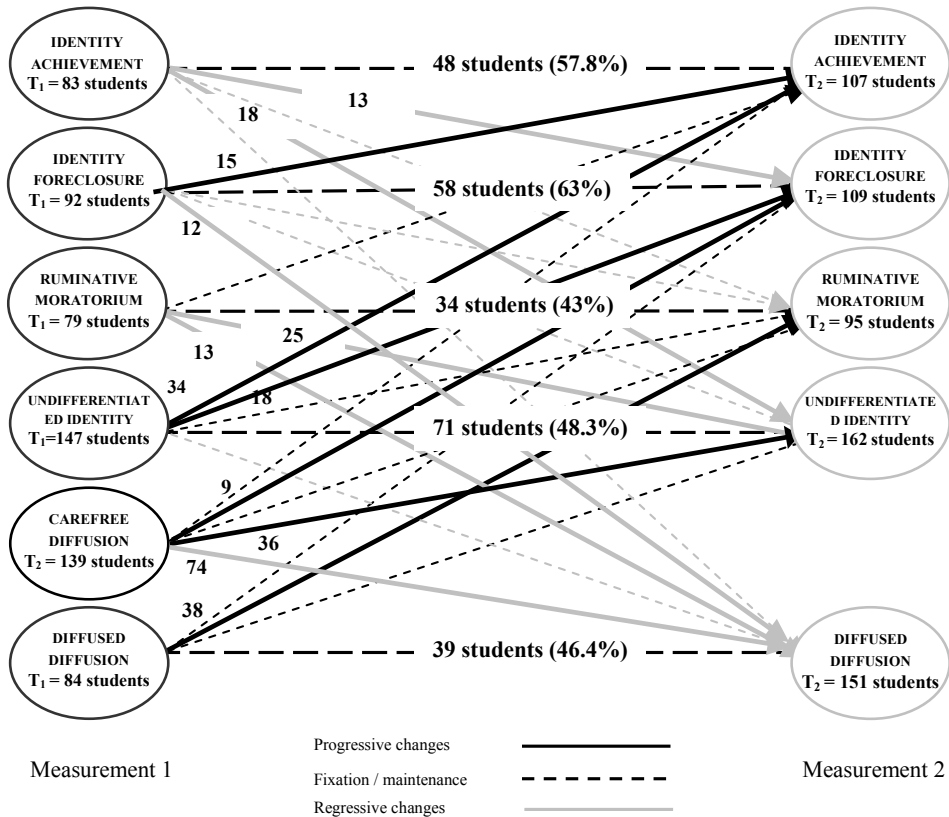


Figure 6b. Changes of identity statuses in first-grade students in school year 2013/2014

3.3. Cohort 3: First-grade students in school year 2014/2015

In Cohort 3, changes of identity statuses were statistically significant ($\chi^2(16) = 402.34, p < .001$, Cramér's $V = .43$), their significance being similar to that in Cohort 1 (Cramér's $V = .41$) and Cohort 2 (Cramér's $V = .47$). First of all, as shown in Figure 7a, the proportion of students with the status of *diffused diffusion* decreased, though only slightly (from 20.2% to 17.4%). The other positive change was an increase in the percentage of students with the status of identity *achievement* (from 18.9% to 21.30%) and the fact that as many as 61.4% of the students maintained this identity status from T1 until T2.

The analysis of data presented in Table 6 shows that, in this cohort, a total of 48.4% of students changed their identity status in the course of the first grade (compared to 57.2% in Cohort 1 and 59.9% in Cohort 2). Progressive changes occurred in 26.7% of students, and regressive changes – in 21.7%. No change of identity status occurred in a total of 51.6% of students, including 11.6% who had the identity *achievement* status both in the first measurement and in the second one.

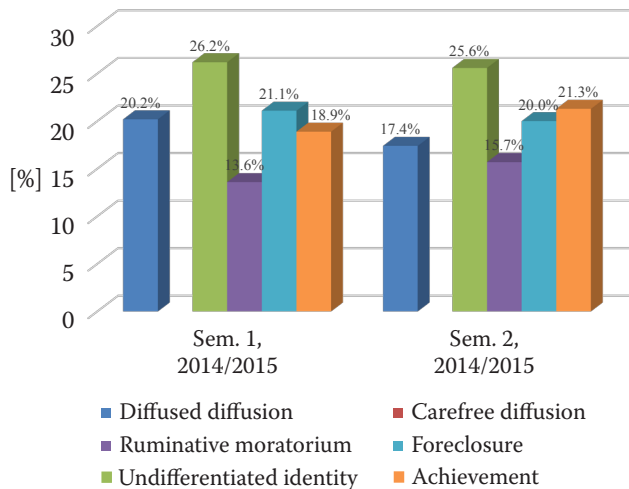


Figure 7a. Identity statuses of first-grade students in school year 2014/2015: Semesters 1 and 2

The number of changes – progressive ones – was the highest in the case of students with *undifferentiated identity*. Although the number of students with this status was almost the same at T1 and at T2 (140 and 137, respectively), the changes in the composition of this subgroup were significant and positive. Of the 140 students with this status at T1, as many as 72 attained better-formed

statuses by the time of the second measurement, namely: 26 attained the status of *ruminative moratorium*, characterised by a considerable intensity of various forms of exploration, 20 attained the status of *foreclosure*, and 26 reached the status of identity *achievement*. Only seven students “fell” to the lower status of *diffused diffusion* in the second measurement.

A similar positive change is visible in the case of students with the *diffused diffusion* status in the first measurement. Although 62 participants (57.4%) maintained this status in the second measurement, 24 (22.2%) moved up to *undifferentiated identity* and 12 (11.1%) moved up to *ruminative moratorium*.

In the case of *ruminative moratorium*, the number of students was similar in the first measurement and in the second one, but the composition of these two groups was definitely different. Half of the students (46.6%) maintained this status and were joined by 12 others with the status of *diffused diffusion* and 26 with *undifferentiated identity* in the first measurement, but a total of 30 students moved down (“fell”) to less mature statuses: 14 to *undifferentiated identity* and 16 to *diffused diffusion*.

Table 6. Changes of Identity Statuses: Cohort 3 (2014/2015)

Identity status: T1 measurement	Identity status: T2 measurement					Total % of n_{tot}
	Diffused diffusion	Undiffer- entiated identity	Ruminative morato- rium	Foreclo- sure	Achieve- ment	
Diffused diffusion	$n = 62$ 57.4%	$n = 24$ 22.2%	$n = 12$ 11.1%	$n = 7$ 6.5%	$n = 3$ 2.8%	$n = 108$ 20.2%
Undifferenti- ated identity	$n = 7$ 5.0%	$n = 61$ 43.6%	$n = 26$ 18.6%	$n = 20$ 14.3%	$n = 26$ 18.6%	$n = 140$ 26.2%
Ruminative moratorium	$n = 16$ 21.9%	$n = 14$ 19.2%	$n = 34$ 46.6%	$n = 2$ 2.7%	$n = 7$ 9.6%	$n = 73$ 13.6%
Foreclosure	$n = 6$ 5.3%	$n = 28$ 24.8%	$n = 6$ 5.3%	$n = 57$ 50.4%	$n = 16$ 14.2%	$n = 113$ 21.2%
Achievement	$n = 2$ 2.0%	$n = 10$ 9.9%	$n = 6$ 5.9%	$n = 21$ 20.8%	$n = 62$ 61.4%	$n = 101$ 18.9%
Total % of n_{tot}	$n = 93$ 17.4%	$n = 137$ 25.6%	$n = 84$ 15.7	$n = 107$ 20.0%	$n = 114$ 21.3%	$n_{\text{tot}} = 535$ 100%

$\chi^2 (16) = 402.34, p < .001, \text{Cramér's } V = .43$

In comparison with Cohorts 1 and 2, changes are more dynamic here (Figure 7b). The number of participants with a given status does not differ much between Measurements 1 and 2, unlike in Cohorts 1 and 2, but the composition of these subgroups is different. Half of the students with the status of

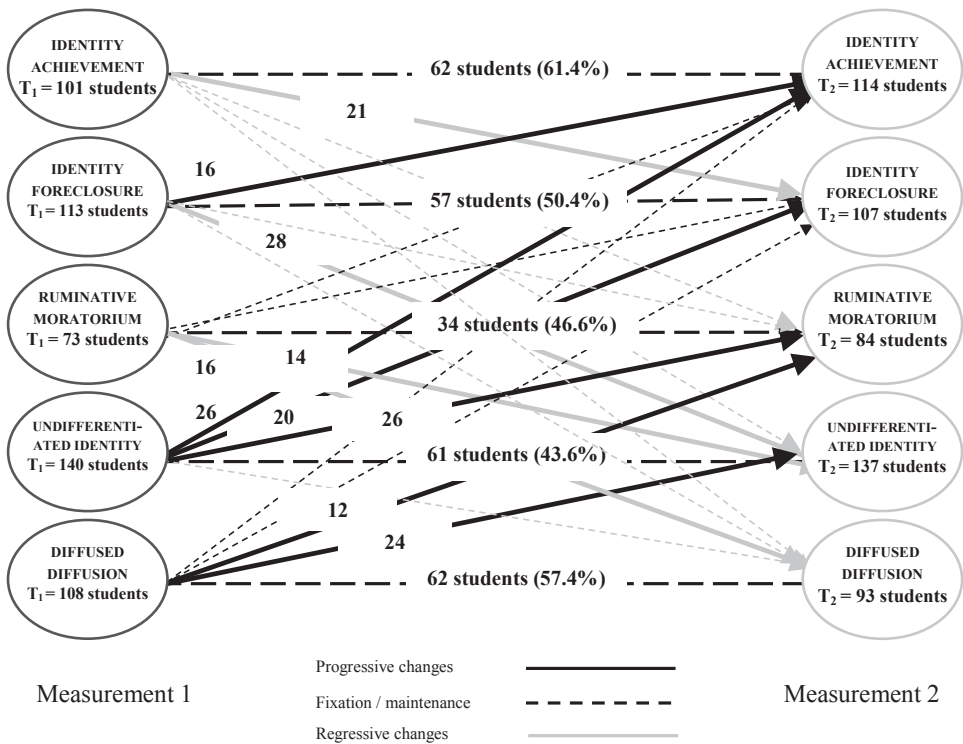


Figure 7b. Changes of identity statuses in first-grade students in school year 2014/2015

foreclosure in the first measurement (50.4%) maintained it by the time of the second measurement, but as many as 28 students (24.8%) “fell” to the status of *undifferentiated identity* and 16 (14.2%) moved up to the status of *achievement*; both of these changes should be regarded as positive in the psychological sense. A negative change in the group with the *achievement* status in the first measurement is the transition to the *foreclosure* status by the time of the second measurement, which occurred in 21 subjects (21.8%).

3.4. Findings

Comparisons of the number of students with a given identity status at the beginning and at the end of the school year, comparisons of the nature and dynamics of these changes over the school year, and comparisons of the associations of the measured variables with particular identity statuses in each cohort show that these are not only groups that differ significantly from one

another in terms of various factors (high intergroup differentiation), but also groups with different levels of intragroup differentiation.

A subgroup of students with the status of *carefree diffusion* was present in Cohorts 1 and 2, but there was no such subgroup in Cohort 3.

In Cohort 1 (2012/2013) the proportion of regressive changes was the highest; Cohort 2 (2013/2014) was characterised by the highest dynamics of changes, which were similarly often regressive and progressive; finally, in Cohort 3 (2014/2015) the dominant changes were progressive ones and those that, despite their regressive character, can be regarded as developmentally positive in view of their long-term effects (cf. the character of changes depicted in Figures 5b, 6b, and 7b).

One of the sources of intergroup differentiation may be the age of the students starting the first grade and the related range of age differentiation in each grade. The higher this differentiation is, the more diverse the developmental needs are, also with regard to identity in the process of formation, and the more difficult it becomes for teachers and form tutors to satisfy those needs. In our study, the mean age of first-grade students was 16.18 years ($s = 0.47$) in Cohort 1 (sch. yr 2012/2013), 16.02 years ($s = 0.44$) in Cohort 2 (sch. yr 2013/2014), and also 16.02 years ($s = 0.37$) in Cohort 3 (sch. yr 2014/2015). As we can see, the mean age was similar, and slight differences occurred in the size of standard deviations.

Analyses showed (Table 7) that age differences between students of different types of schools were small in Cohorts 1 and 2 (the value of η^2 in both cohorts

Table 7. The Significance of Age Differences in First-Grade Students: Within Cohorts According to Type of School

Type of school	sch. yr 2012/2013		sch. yr 2013/2014		sch. yr 2014/2015	
	Cohort 1 $n = 234$		Cohort 2 $n = 624$		Cohort 3 $n = 535$	
	M	s	M	s	M	s
basic vocational school	16.30	0.56	16.22	0.64	16.34	0.51
technical upper secondary school	16.10	0.39	15.99	0.42	15.97	0.29
specialised/general upper secondary school in a VCS	16.22	0.52	15.99	0.49	16.01	0.43
general upper secondary school			15.98	0.28	15.98	0.28
Significance of differences	$F(2, 231) = 3.84$ $p < .05$ $\eta^2 = .03$		$F(3, 619) = 6.87$ $p < .001$ $\eta^2 = .03$		$F(3, 519) = 20.65$ $p < .001$ $\eta^2 = .11$	

is .03), while the corresponding differences in Cohort 3 may have influenced the results to a certain extent ($\eta^2 = .11$). Firstly, in Cohort 3 students of basic vocational schools were slightly older than their colleagues from different types of schools. Secondly, students from those schools were much more diverse in terms of age (cf. the values of standard deviation in Table 7), though this observation also refers to Cohorts 1 and 2. In general, age diversity was the lowest in groups of students from general upper secondary schools in Cohorts 2 and 3 and in the group of technical upper secondary school students in Cohort 3.

Another factor differentiating the results may have been the proportion between the genders in each cohort. The percentages of women were as follows, respectively: 88%, 81%, and 89% in basic vocational schools; 41%, 35%, and 38% in technical upper secondary schools; 56%, 49%, and 43% in general and specialised upper secondary schools in vocational school complexes; and 58% and 70% in general upper secondary schools that were not part of VSCs (these were not included in Cohort 1). Thus, the differences in the proportion of women and men across school types were similar in each of the three cohorts.

The analyses performed reveal (cf. Table 8 – the values of Cramér's V) that gender distribution in particular types of school was significantly different in each cohort. Therefore, gender may have been a factor of significance to the degree of intragroup differentiation of scores in all cohorts. As shown in Table 2,

Table 8. The Significance of Gender Differences in First-Grade Students: Within Cohorts According to School Type

Type of school	sch. yr 2012/2013		sch. yr 2013/2014		sch. yr 2014/2015	
	Cohort 1 $n = 232$ (missing data = 2)		Cohort 2 $n = 624$		Cohort 3 $n = 535$	
	women	men	women	men	women	men
basic vocational school	53 (88.3%)	7 (11.7%)	65 (81.3%)	15 (18.8%)	59 (89.4%)	7 (10.6%)
technical upper secondary school	54 (40.6%)	79 (59.4%)	102 (35.1%)	189 (64.9%)	98 (37.5%)	163 (62.5%)
specialised/general upper secondary school in a VSC	22 (56.4%)	17 (43.6%)	39 (48.8%)	41 (51.2%)	34 (42.5%)	46 (57.5%)
general upper secondary school			100 (57.8%)	73 (42.2%)	89 (69.5%)	39 (30.5%)
Total	129 (55.6%)	103 (44.4%)	306 (49%)	318 (51%)	280 (52.3%)	255 (47.7%)
Significance of differences	$\chi^2 (2) = 38.17$ $p < .001$ $V = .41$		$\chi^2 (3) = 61.32$ $p < .001$ $V = .31$		$\chi^2 (3) = 77.49$ $p < .001$ $V = .38$	

this differentiating effect of gender with regard to identity statuses manifested itself more clearly only in both measurements in Cohort 2 and in the second measurement in Cohort 3.

What was also of some significance to intergroup differences being so large in the three cohorts of first-grade students was probably the strong anxiety on the part of parents, teachers, and students themselves, stemming from the effects of the 2011 law that introduced changes to the structure of upper secondary education (Dz.U. [*Polish Journal of Laws*] no. 205, item 1206), including the liquidation of specialised upper secondary schools and general upper secondary schools with specialised classes, which also functioned in vocational school complexes. This law had certain effects during the period in which we conducted our research. In school year 2012/2013, when we were conducting it for the first time, new classes were no longer launched in specialised upper secondary schools in vocational school complexes; however, not in all vocational school complexes were general upper secondary classes created.

4. Correlates of Identity Statuses

4.1. Psychological correlates of identity statuses in Cohort 1 (2012/2013)

In the first cohort of first-grade students, we measured the same psychological variables at the beginning of the first semester and towards the end of the second semester. These were variables belonging to the domains of cognitive (three styles of processing identity problems), emotional (three types of self-conscious emotions and six types of difficulties in emotion regulation), and social functioning (two types of life orientation). All of these 14 factors were considered in terms of their role in differentiating students with qualitatively different identity statuses. Table 9a presents the outcomes of the analysis of first measurement results, and Table 9b – of second measurement results.

Both in the first measurement and in the second one, scores were similar in the case of students with different identity statuses but falling into in the same general category: identity diffusion, identity moratorium, or formed identity. This is another confirmation of the hypothesis regarding young people's different ways of resolving identity crisis and different behaviour in different phases of coping with this crisis. What is noticeable is the relatively high values of standard deviation for indicators of difficulties in emotion regulation in both measurements. They are not systematically linked with any particular identity statuses. Perhaps this is a feature of young people's emotional functioning in

Table 9a. Psychological Correlates of Identity Statuses in Cohort 1 (2012/2013; $n = 234$): Measurement in the First Semester (Arithmetic Means and Standard Deviations)

Variable	Type of identity status					Significance of differences: F and $p < \eta^2$	
	Identity diffusion	Identity moratorium	Undifferentiated identity	Ruminative moratorium	Formed identity		
	Diffused diffusion				Foreclosure	Achievement	
Diffuse style	2.79 (0.66) b	2.62 (0.81) b	2.49 (0.74) b	1.71 (0.70) a	1.85 (0.64) a	16.66, $p < .001$.25	
Normative style	2.55 (0.69) a	3.10 (0.66) b	3.02 (0.54) b	3.21 (0.89) b	3.32 (0.81) b	4.57, $p < .01$.08	
Informational style	3.87 (0.80) a	4.13 (0.53) a b	4.32 (0.55) b c	4.20 (0.69) a b	4.59 (0.36) c	8.14, $p < .001$.14	
		Styles of processing identity problems					
		Self-conscious emotions					
Pride	2.96 (0.90) a	3.24 (0.78) a b	3.33 (0.71) a b c	3.76 (0.71) c	3.63 (0.70) b c	5.87, $p < .001$.10	
Guilt	2.74 (0.84)	2.88 (0.82)	2.95 (0.78)	2.50 (0.77)	2.71 (0.72)	2.13 <i>ns</i>	
Shame	2.52 (0.77) b	2.40 (0.80) b	2.47 (0.82) b	1.83 (0.72) a	2.11 (0.77) a b	5.01, $p < .01$.09	

Difficulties in emotion regulation						
Lack of emotional awareness	3.02 (1.03) b	2.67 (0.85) a b	2.31 (0.74) a	2.55 (0.92) a b	2.20 (0.70) a	5.04, $p < .01$.09
Lack of emotional clarity	2.62 (1.10) b	2.01 (0.74) a	2.30 (0.79) a b	1.92 (0.79) a	1.89 (0.72) a	4.48, $p < .01$.08
Nonacceptance of emotional responses	2.21 (1.16) a b	2.17 (0.81) a b	2.38 (0.93) b	1.85 (0.95) a b	1.87 (0.85) a	2.76, $p < .05$.05
Difficulties engaging in goal-directed behaviour	3.56 (1.07) b	3.20 (1.05) b	3.17 (1.11) a b	2.49 (1.16) a	3.07 (1.12) a b	3.83, $p < .01$.07
Impulse control difficulties	2.68 (1.20)	2.50 (1.11)	2.70 (1.31)	2.03 (1.23)	2.27 (1.23)	2.01; <i>ns</i>
Limited access to emotion regulation strategies	2.48 (1.11) a b	2.42 (1.00) a b	2.62 (1.10) b	1.96 (0.95) a	2.19 (1.05) a b	2.53, $p < .05$.05
Life orientation						
Moratorium orientation	3.44 (0.97) c	3.25 (0.68) b c	3.26 (0.70) b c	2.74 (0.86) a	2.87 (0.65) a b	5.45, $p < .001$.10
Transitive orientation	2.95 (0.61) a	3.60 (0.59) b	3.53 (0.54) b	4.04 (0.66) c	4.14 (0.49) c	21.51, $p < .001$.30

Note. Letters *a - d* indicate groups that do or do not differ from one another to a statistically significant degree.

Table 9b. Psychological Correlates of Identity Statuses in Cohort 1 (2012/2013; n = 234): Measurement in the Second Semester (Arithmetic Means and Standard Deviations)

Variable	Identity diffusion				Type of identity status				Significance of differences: F and $p < \eta^2$
	Diffused diffusion	Carefree diffusion	Undifferentiated identity	Identity moratorium	Foreclosure	Formed identity	Achievement		
Styles of processing identity problems									
Diffuse style	2.97 (0.71) d	2.75 (0.57) c d	2.32 (0.70) b c	2.38 (0.76) c	1.89 (0.57) a b	1.83 (0.65) a		16.95, $p < .001$.27	
Normative style	2.82 (0.68) a b	2.68 (0.52) a	3.14 (0.68) a b	3.18 (0.69) b	2.91 (0.74) a b	3.22 (0.92) b		3.09, $p < .05$.06	
Informational style	4.09 (0.50) a b	3.50 (0.51) a	3.95 (0.58) b	4.36 (0.50) b	4.20 (0.70) a b	4.35 (0.62) b		8.99, $p < .001$.17	
Self-conscious emotions									
Pride	3.14 (0.86) a b	2.78 (0.66) a	3.29 (0.70) b	3.53 (0.65) b c	3.48 (0.81) b c	3.90 (0.58) c		9.1, $p < .001$.17	
Guilt	3.02 (0.78) b	2.59 (0.70) a b	2.81 (0.74) b	2.88 (0.82) b	2.30 (0.65) a	2.70 (0.76) a b		4.37, $p < .01$.09	
Shame	2.63 (0.85) c	2.36 (0.78) a b c	2.28 (0.72) a b c	2.40 (0.90) b c	1.85 (0.65) a	2.02 (0.81) a b		4.84, $p < .001$.10	

Difficulties in emotion regulation							
Lack of emotional awareness	2.67 (0.73) a	3.49 (0.63) b	2.50 (0.89) a	2.20 (0.86) a	2.68 (1.01) a	2.33 (0.93) a	7.60, $p < .001$.14
Lack of emotional clarity	2.30 (0.79) b	2.08 (0.85) a b	2.13 (0.79) a b	2.14 (0.96) a b	1.70 (0.75) a	2.17 (0.89) a b	2.29, $p < .05$.05
Nonacceptance of emotional responses	2.58 (1.25) b	1.83 (0.78) a	2.26 (0.88) a b	2.10 (0.95) a b	1.70 (0.82) a	2.13 (1.01) a b	3.88, $p < .01$.08
Impulse control difficulties	2.94 (1.30) b	2.41 (1.32) a b	2.51 (1.12) a b	2.41 (1.17) a b	1.94 (0.94) a	2.34 (1.32) a b	2.78, $p < .001$.06
Limited access to emotion regulation strategies	2.82 (1.27) b	2.01 (0.95) a	2.47 (1.02) a b	2.34 (1.03) a b	1.78 (0.80) a	2.32 (1.12) a b	4.44, $p < .01$.09
Difficulties engaging in goal-directed behaviour	3.62 (1.03) c	2.92 (1.07) a b c	2.90 (0.98) a b	3.29 (1.10) b c	2.49 (0.88) a	2.86 (1.20) a b	5.37, $p < .001$.11
Life orientation							
Moratorium orientation	3.41 (0.64) b	3.13 (0.81) a b	3.19 (0.73) a b	3.07 (0.76) a b	2.96 (0.83) a b	2.85 (0.75) a	2.74, $p < .05$.06
Transitive orientation	3.29 (0.64) a b	2.91 (0.60) a	3.63 (0.58) b	3.60 (0.58) b	3.62 (0.66) b	4.18 (0.48) c	16.62, $p < .001$.27

Note. Letters *a - d* indicate groups that do or do not differ from one another to a statistically significant degree.

late adolescence, or perhaps this stems from the need to adapt to the new educational and peer environment.

Figure 8a presents the configurations of psychological correlates for students with different identity statuses at the beginning of the first grade, and Figure 8b – near the end of the first grade. What draws attention in the second measurement is the profile of the group of students with the *carefree diffusion* status (not found in the first measurement). They exhibit the lowest level of informational style of coping with identity problems, the lowest sense of pride, the highest lack of emotional awareness, and the lowest level of transitive life orientation. This subgroup could be described as the most educationally neglected one in the tested cohort of first-grade students. The appearance of such a group of students near the end of the first grade is disturbing. They constituted about 10% of the entire cohort, which means they were individual “neglected” students in the tested classes.

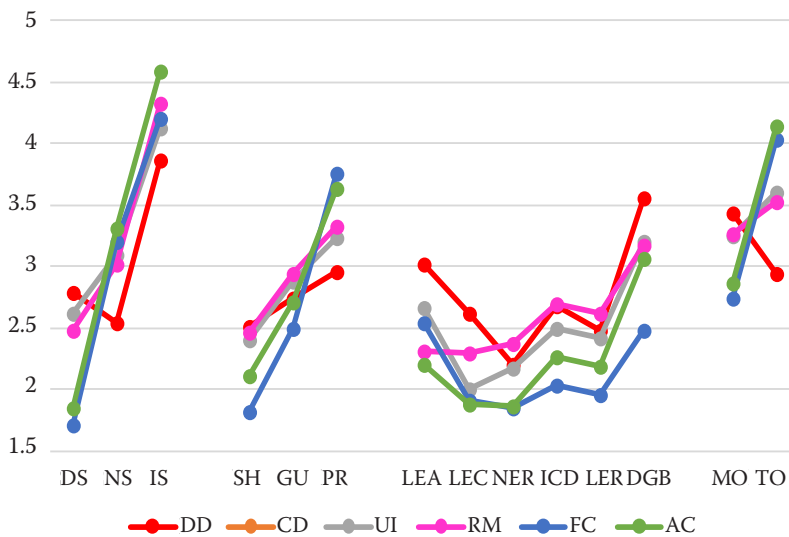


Figure 8a. Profiles of first-grade students with different identity statuses in Cohort 1 (n = 234): 1st semester of sch. yr 2012/2013

Note. DS – diffuse style of processing identity problems; NS – normative style; IS – informative style; SH – shame; GU – guilt; PR – pride; LEA – lack of emotional awareness; LEC – lack of emotional clarity; NER – nonacceptance of emotional responses; ICD – impulse control difficulties; LER – limited access to emotion regulation strategies; DGB – difficulties engaging in goal-directed behaviour; MO – moratorium orientation; TO – transitive orientation; identity statuses: DD – diffused diffusion; CD – carefree diffusion; UI – undifferentiated identity; RM – ruminative moratorium; FC – foreclosure; AC – achievement

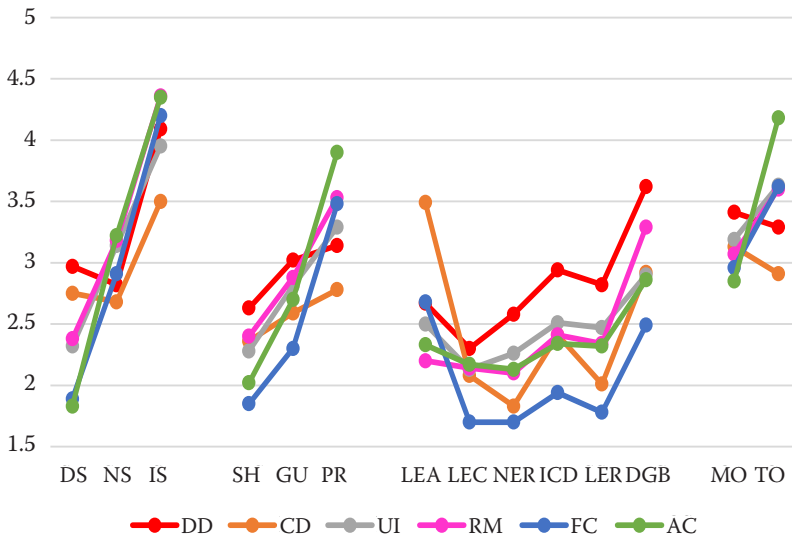


Figure 8b. Profiles of first-grade students with different identity statuses in Cohort 1 (n = 234): 2nd semester of sch. yr 2012/2013

Note. DS – diffuse style of processing identity problems; NS – normative style; IS – informative style; SH – shame; GU – guilt; PR – pride; LEA – lack of emotional awareness; LEC – lack of emotional clarity; NER – nonacceptance of emotional responses; ICD – impulse control difficulties; LER – limited access to emotion regulation strategies; DGB – difficulties engaging in goal-directed behaviour; MO – moratorium orientation; TO – transitive orientation; identity statuses: DD – diffused diffusion; CD – carefree diffusion; UI – undifferentiated identity; RM – ruminative moratorium; FC – foreclosure; AC – achievement

The profiles of students with different types of identity statuses differ in the level and configuration of the variables measured (Figures 8a and 8b). The comparison of information about the significance of differences between subgroups with different statuses in the two measurements, presented in Tables 9a and 9b, shows that, in both cases and in both measurements, the factors that turned out to be the most significant and the most beneficial from the point of view of identity formation were: strong transitive life orientation ($\eta^2 = .30$ and $.27$ at T1 and T2, respectively) and not very frequent use of the diffuse style of processing identity information ($.25$ and $.27$, respectively).

The following were also significant in both measurements, though somewhat less so: more frequent use of the informational style ($.14$ and $.17$), low sense of shame ($.09$ and $.10$), high sense of pride ($.10$ and $.17$), and high emotional awareness ($.09$ and $.14$). Additionally, certain other factors turned out to be significant only in the second measurement, namely: sense of guilt ($.09$) as well as difficulties in emotional regulation consisting in the interference of

emotions with goal-directed behaviour (.11) and in limited access to emotion regulation strategies (.09).

Of the 14 factors examined, five were considerably significant (effect size: $\eta^2 \geq .10$) in the first measurement and seven in the second one, four factors being common to these two groups: diffuse and informational identity style, sense of pride, and transitive orientation.

What was probably also of some importance to the obtained configuration of results (more often negative than positive changes in identity statuses over the first year of study) was the fact that Cohort 1 consisted only of students from schools with vocational curricula, especially as they were tested shortly after changes in the structure of the vocational school system, consisting, among other things, in the liquidation of specialised upper secondary schools that were part of vocational school complexes.

4.2. Psychological correlates of identity statuses in Cohort 2 (2013/2014)

In Cohort 2, we focused on analysing the emotional correlates of identity statuses. The sample of students was highly diverse, since it consisted of students attending schools with both vocational and general curricula. The analysis showed that changes of identity statuses were numerous and diverse, both positive and negative, and the dynamics of changes involving interstatus transitions was higher than in Cohort 1. However, the analysis of the significance of the tested emotional variables to the type of identity status and the character of changes (transitions between statuses), both in the first measurement and in the second one, revealed their small significance, yielding low η^2 values of effect size (see data in Table 10).

The link between the levels of the three examined self-conscious emotions and the types of identity was weak, though significant and stable, similar in both measurements for each of the emotions. The values of η^2 were .09 and .07, respectively, for the sense of pride; the corresponding figures for the sense of guilt were .05 and .06, and for the sense of shame – .08 in both measurements. The significance of shame rumination was not much higher (.10 and .09), and the emotion regulation strategy consisting in cognitive reappraisal was only marginally significant. Nonsignificant differences were found between students with different identity statuses in terms of the emotion regulation strategy of expressive suppression. Similarly, negligible were the associations with both indicators of the experience of dissociation: amnesia (η^2 : .03 and .02) and depersonalisation ($\eta^2 = .03$ in the first measurement and nonsignificant differences in the second measurement).

Table 10. Psychological Correlates of Identity Statuses in Cohort 2 (2013/2014: n = 624): Measurement in the First and Second Semesters (Arithmetic Means and Standard Deviations)

Variable	Measurement	Identity status type					Significance of differences: F and $p < \eta^2$	
		Identity diffusion		Identity moratorium		Formed identity		
		Diffused diffusion	Carefree diffusion	Undifferentiated identity	Ruminative moratorium	Foreclosure	Achievement	
Pride	T1	2.47 (0.82) a	2.90 (0.73) b	3.06 (0.80) b c	2.92 (0.78) b	3.30 (0.92) c	3.26 (0.85) c	11.89, $p < .001$.09
	T2	2.77 (0.87) a b		3.04 (0.78) b c	2.73 (0.91) a	3.35 (0.75) d	3.23 (0.84) c d	12.36, $p < .001$.07
Guilt	T1	2.90 (0.68) b	2.50 (0.72) a	2.68 (0.72) a b	2.89 (0.71) b	2.45 (0.68) a	2.72 (0.77) a b	6.45, $p < .001$.05
	T2	2.56 (0.78) b		2.64 (0.69) b	2.94 (0.76) c	2.28 (0.63) a	2.63 (0.81) b	10.32, $p < .001$.06
Shame	T1	2.54 (0.74) d	2.06 (0.65) a b	2.23 (0.76) b c	2.37 (0.72) c d	1.81 (0.62) a	2.17 (0.76) b c	10.99, $p < .001$.08
	T2	2.24 (0.83) b		2.19 (0.70) b	2.52 (0.82) c	1.79 (0.53) a	2.11 (0.73) b	13.03, $p < .001$.08

Table 10. continuation

		Coping with emotions							
Cognitive reappraisal	T1	3.23 (0.72)	3.19 (0.68)	3.57 (0.72)	3.53 (0.84)	3.44 (0.82)	3.50 (0.79)	5.25, $p < .001$	
	T2	3.29 (0.77)	a	c	b c	a b c	b c	.04	
Expressive suppression	T1	2.94 (0.81)	2.90 (0.83)	2.76 (0.88)	2.82 (0.82)	2.82 (0.77)	3.09 (0.88)	4.23, $p < .01$	
	T2	2.92 (0.81)	a b	c d	a b	a	b c	.03	
Shame rumination	T1	2.99 (0.72)	2.33 (0.76)	2.69 (0.83)	2.79 (0.85)	2.19 (0.81)	2.57 (0.81)	1.93	
	T2	2.37 (0.86)	a b	c d	c d	a	b c	<i>ns</i>	
				2.47 (0.72)	2.77 (0.87)	1.94 (0.80)	2.54 (0.88)	1.92	
				b	c	a	b c	<i>ns</i>	
								13.26, $p < .001$	
								.10	
								14.30, $p < .001$	
								.09	

Note. Letters *a - d* indicate groups that do or do not differ from one another to a statistically significant degree.

It can therefore be concluded that the examined emotional variables were very weakly associated with the type and changes of identity status. The significance of self-conscious emotions was similarly low as it was in Cohort 1, while the strategies of coping with emotions were of practically no significance.

Figure 9 presents the levels of the examined factors in subgroups of students differing in terms of identity status in both measurements. Although the differences are small (cf. letter indications in Table 10), certain interesting and practically important tendencies are visible. First, the sense of pride in subjects with formed identity – in the postcrisis phase – was higher than in other students, and it was similar in both subgroups with this type of identity (*foreclosure* and *achievement* statuses). By contrast, shame and guilt, as well as the level of shame rumination, were significantly higher in both measurements in students with the *achievement* status than in those with the status of *foreclosure*. Second, students with the *foreclosure* status had the lowest level of shame and the lowest level of shame rumination in the whole cohort. Third, we found high and similar levels of shame rumination in students with the statuses of *diffused diffusion*, *ruminative moratorium*, and *undifferentiated identity*.

The levels of all three self-conscious emotions and shame rumination are not systematically related to the phases of identity crisis resolution. With identity statuses divided into three categories – identity diffusion, the least

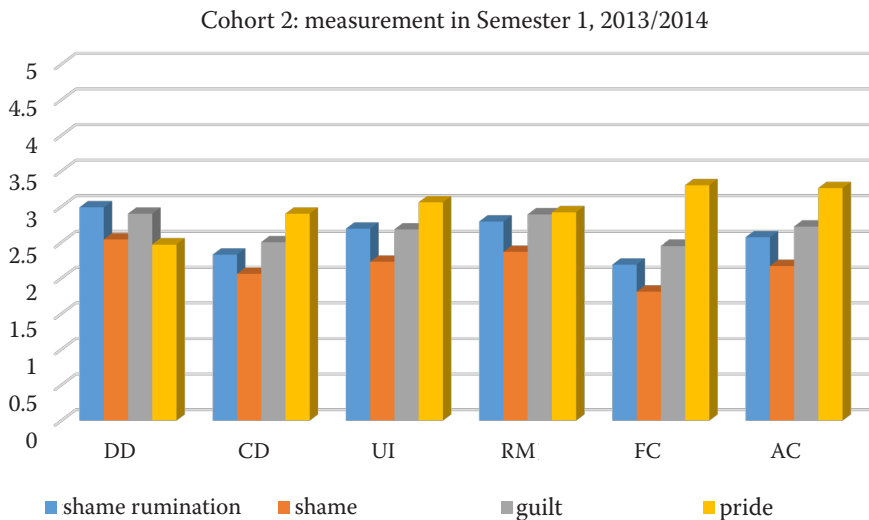


Figure 9. Patterns of self-conscious emotions in first-grade students with different identity statuses in Cohort 2 ($n = 624$): Semesters 1 and 2, 2013/2014

Note. Identity statuses: RD – ruminative diffusion; CD – carefree diffusion; UI – undifferentiated identity; RM – ruminative moratorium; FC – foreclosure; AC – achievement

mature, and still in the precrisis phase; identity moratorium, “in crisis”; and formed identity, in the postcrisis phase – there is no visible order from low to high sense of pride and no reverse order, from high to low, in the case of guilt, shame, or shame rumination. It can therefore be supposed that this is not a simple linear relation.

The second finding concerns the role of the three emotions in the processes of identity formation. If participants with the *achievement* status feel significantly higher shame and guilt compared to participants with the *foreclosure* status, this means that some measure of these two emotions is indispensable in the formation of the most mature identity status, with a balanced proportion of exploration and commitment processes.

The analysis of correlations¹ yields a very interesting picture. The three examined emotions perform a regulatory role in people with the status of *achievement*, since they are significantly, though weakly, correlated with the dimensions of identity development, mainly in the first measurement, performed at the beginning of the first grade. The sense of shame is positively associated with exploration in breadth (Measurement 1: $R^2 = 7.1\%$; Measurement 2: *ns*), and so is the sense of guilt (Measurement 1: $R^2 = 6.5\%$; Measurement 2: *ns*). Moreover, there is a significant and positive link between the sense of shame and exploration in depth (Measurement 1: $R^2 = 7.5\%$; Measurement 2: *ns*) and between the sense of pride and commitment making (Measurement 1: $R^2 = 11.1\%$; Measurement 2: *ns*). Negative associations exist between the sense of shame and commitment making (Measurement 1: $r = -.303$, $R^2 = 9.2\%$; Measurement 2: *ns*) as well as between the sense of guilt and commitment making (Measurement 1: $r = -.312$, $R^2 = 9.7\%$; Measurement 2: *ns*). For students with the *foreclosure* status, the picture is entirely different – in their case, the three examined self-conscious emotions do not perform a regulatory role in identity formation. In the first measurement, the only significant association existed between the sense of guilt and commitment making, and even that one was very weak ($R^2 = 4.6\%$).

In students with the *achievement* status at the beginning of the new school, moderate levels of shame and guilt probably had a motivating effect and triggered exploratory activities, which served the purpose of collecting information (exploration in breadth) and verifying it (exploration in depth). At the same time, they may have hindered activities connected with commitment making – but when such activities did appear, the sense of pride increased. This may

¹ Cf. Appendix 3. Correlation Matrices for the Second Cohort of First-Grade Students – School Year 2013/2014 (Two Measurements): Dimensions of Identity Development vs. Shame, Guilt, and Pride.

explain why so many students (58%) maintained their initial status of *achievement* in the second measurement.

It is therefore worth asking questions not so much about the levels of these emotions (from very low through “optimal” to very high) or their possible disrupting (guilt, shame, and shame rumination) or supporting (pride) impact on identity building, as about their role in the processes of exploration and commitment, particularly about their links with ruminative exploration – that is, about their maladaptive impact on functioning, especially in individuals with identity diffusion or moratorium.

The results of the comparative analysis of associations between identity dimensions and the three examined emotions – shame, guilt, and pride – in individuals with different identity statuses in the three cohorts of first-grade students are presented in section 5.2.

4.3. Psychological correlates of identity statuses in Cohort 3 (2014/2015)

In Cohort 3, just like in the second one, we tested students of all types of upper secondary schools – general as well as vocational. In the first semester, we focused mainly on emotional correlates and the two indicators of identity capital (Table 11a). In the second semester, we tested the characteristics of cognitive (styles of processing identity problems and indicators of cognitive closure), emotional (pride, guilt, shame), and social functioning (identity capital and general satisfaction with life) (Table 11b). The aim was to identify similarities and differences in terms of these characteristics between students with different configurations of the dimensions of identity development – that is, with different identity statuses.

In the first semester, at the beginning of the first grade, the factor that differentiated the type of identity status to the greatest degree was community identity as an indicator of identity capital (the value of η^2 was .20); to a much smaller degree, the differentiating factors were shame ($\eta^2 = .10$), shame rumination (.08), guilt (.08), and pride (.09). In neither case did differences between participants with different identity statuses follow a pattern corresponding to the level of identity formation or maturity (cf. letter symbols in Table 11a).

Community identity was the highest in individuals with the status of *achievement*, significantly lower in students with the statuses of *foreclosure* (formed identity) and *undifferentiated identity* (identity moratorium), and the lowest in those with the statuses of *ruminative moratorium* (identity moratorium) and *diffused diffusion*. In the case of shame, the score was the lowest

Table 11a. Psychological Correlates of Identity Statuses in Cohort 3 (2014/2015; n = 535): Measurement in the First Semester (Arithmetic Means and Standard Deviations)

Variable	Type of identity status						Significance of differences: F and $p < \eta^2$
	Identity diffusion	Undifferentiated identity	Identity moratorium	Ruminative moratorium	Foreclosure	Formed identity	
	Self-conscious emotions						
Pride	2.86 (0.90) a b	3.17 (0.80) b c	2.74 (0.82) a	3.28 (0.84) c d	3.52 (0.81) d	13.40, $p < .001$.09	
Guilt	2.50 (0.68) a b	2.73 (0.71) b c	2.96 (0.89) c	2.31 (0.62) a	2.78 (0.71) b c	11.95, $p < .001$.08	
Shame	2.13 (0.68) b	2.08 (0.61) b	2.57 (0.90) c	1.76 (0.60) a	2.10 (0.75) b	14.56, $p < .001$.10	
	Coping with shame						
Cognitive reappraisal (ERQ/PL)	3.20 (0.75) a	3.44 (0.76) a b	3.34 (0.81) a	3.30 (0.86) a	3.71 (0.75) b	6.18, $p < .001$.05	
Expressive suppression (ERQ/PL)	2.96 (0.88)	2.75 (0.89)	2.90 (0.72)	2.67 (0.85)	2.85 (0.86)	2.06 <i>ns</i>	
Shame rumination (SRQ)	2.42 (0.74) a b	2.62 (0.76) b c	2.91 (0.89) c	2.15 (0.77) a	2.57 (0.84) b	11.68, $p < .001$.08	
	Identity capital						
Adult identity	2.84 (0.70) a	3.04 (0.62) a b	2.91 (0.73) a	3.08 (0.73) a b	3.24 (0.73) b	4.88, $p < .01$.04	
Community identity	2.70 (0.69) a	3.15 (0.61) b	2.80 (0.71) a	3.35 (0.66) b	3.66 (0.72) c	33.73, $p < .001$.20	

Table 11b. Psychological Correlates of Identity Statuses in Cohort 3 (2014/2015; n = 535): Measurement in the Second Semester (Arithmetic Means and Standard Deviations)

Variable	Type of identity status					Significance of differences: F and $p < \eta^2$
	Identity diffusion	Identity moratorium	Foreclosure	Formed identity	Achievement	
	Diffused diffusion	Undifferentiated identity	Ruminative moratorium	Foreclosure	Achievement	
	Styles of processing identity problems					
Diffuse	2.96 (0.73) c	2.51 (0.67) b	2.61 (0.74) b	1.84 (0.69) a	1.84 (0.72) a	49.18, $p < .001$.27
Normative	2.63 (0.66) a	3.09 (0.69) b	2.94 (0.79) b	3.17 (0.78) b c	3.42 (0.84) c	14.59, $p < .001$.10
Informational	3.80 (0.73) a	4.09 (0.66) b	4.27 (0.50) b c	4.18 (0.58) b	4.49 (0.50) c	17.57, $p < .001$.12
	Need for cognitive closure					
Closed-mindedness	3.11 (0.73) a b	2.97 (0.70) b	2.68 (0.77) a	2.92 (0.71) a b	2.72 (0.81) a	5.37, $p < .001$.08
Discomfort with ambiguity	3.86 (0.83) b	3.94 (0.69) b c	4.31 (0.87) d	3.78 (0.91) b	4.23 (0.82) c d	8.06, $p < .001$.06
Preference for order	3.33 (0.88) a	3.61 (0.71) a b	3.87 (0.98) b	3.72 (0.91) b	4.25 (0.93) c	15.38, $p < .001$.11
Preference for predictability	3.29 (0.97) a	3.43 (0.85) a b	3.62 (1.03) a b	3.32 (0.99) a	3.74 (1.01) b	4.12, $p < .001$.03
Decisiveness	3.41 (0.96) b	3.45 (0.77) b	3.06 (0.92) a	3.86 (0.84) c	3.96 (0.90) c	17.19, $p < .001$.12

Table 11b. continuation

Self-conscious emotions						
Shame	2.14 (0.78) b	2.00 (0.64) a b	2.47 (0.91) c	1.80 (0.58) a	1.97 (0.61) a b	11.91, $p < .001$.08
Guilt	2.49 (0.81) a b	2.47 (0.75) a	2.78 (0.86) b	2.25 (0.67) a	2.49 (0.71) a	5.63, $p < .001$.04
Pride	2.93 (0.87) a b	3.10 (0.73) b	2.78 (0.89) a	3.20 (0.86) b	3.52 (0.81) c	11.46, $p < .001$.08
Life orientation						
Moratorium orientation	3.59 (0.69) c	3.32 (0.71) b c	3.12 (0.85) b	3.15 (0.76) b	2.80 (0.77) a	14.50, $p < .001$.10
Transitive orientation	2.97 (0.59) a	3.46 (0.48) b	3.53 (0.63) b	3.63 (0.56) b	4.08 (0.49) c	53.31, $p < .001$.29
Identity capital						
Adult identity	2.91 (0.68) a	3.04 (0.69) a b	2.96 (0.77) a b	3.21 (0.72) b	3.51 (0.75) c	12.19, $p < .001$.09
Community identity	2.75 (0.74) a	3.13 (0.65) b	2.88 (0.68) a b	3.46 (0.74) c	3.67 (0.78) c	28.50, $p < .001$.18
Quality of life						
General satisfaction with life	3.57 (0.91) a b	3.86 (0.66) b c	3.53 (1.01) a	4.08 (0.86) c d	4.33 (0.84) d	15.80, $p < .001$.11

in the case of students with the *foreclosure* status, higher (and similarly high) in groups with the statuses of *diffused diffusion*, *undifferentiated identity*, and *achievement*, and the highest in students with the status of *ruminative moratorium*. We found a similarly “jumbled” order in the case of the remaining emotional variables tested in the study.

The results show that in this cohort of first-grade students emotional factors did not systematically or significantly differentiate individuals with different identity statuses. What attests to this is the low values of η^2 and the inconsistent pattern of similarities and differences between students with different degrees of identity formation. The conclusion is similar as in the case of Cohorts 1 or 2: either emotional factors have little direct role in the formation of particular identity statuses, or they are not related to them in a simple linear way. This conclusion is confirmed also by the analysis of the role of the three self-conscious emotions tested in relation to the type of identity status in Cohort 3 in the second measurement, towards the end of the first grade (Table 11b – see

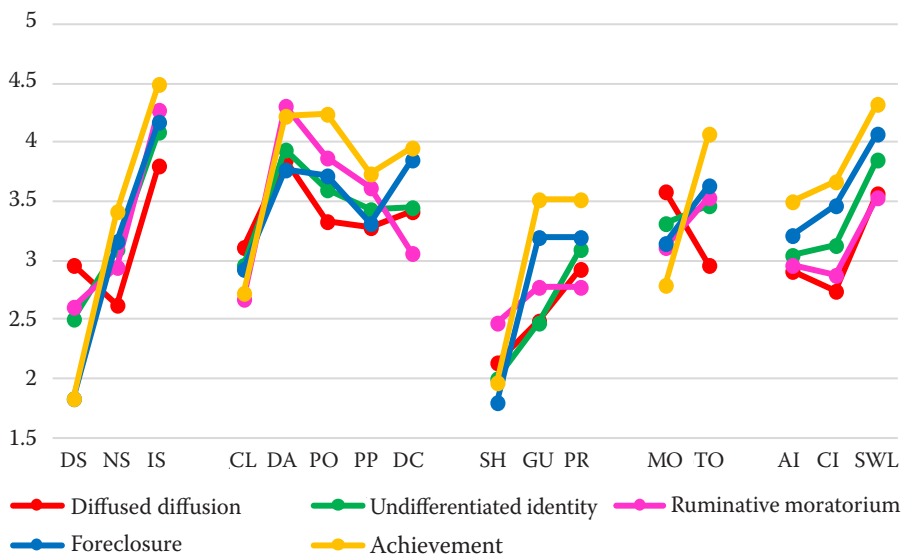


Figure 10. Profiles of first-grade students with different identity statuses in Cohort 3 ($n = 535$): 2nd semester of sch. yr 2014/2015

Note. Styles of processing identity problems: DS – diffuse style; NS – normative style; IS – informational style; indicators of the need for cognitive closure: CL – closed-mindedness; DA – discomfort with ambiguity; PO – preference for order; PP – preference for predictability; DC – decisiveness; self-conscious emotions: SH – shame; GU – guilt; PR – pride; life orientation: MO – moratorium orientation; TO – transitive orientation; identity capital indicators: AI – adult identity and CI – community identity; SWL – general satisfaction with life

the letters for pride, guilt, and shame). The ways of coping with emotions were of marginal significance, just like in Cohort 2.

The pattern of results is much more diverse and interesting in the case of factors measured in the second semester (Table 11b). In this case, the most significant factors turned out to be: transitive life orientation ($\eta^2 = .29$), diffuse style of processing identity problems ($\eta^2 = .27$), and community identity as an indicator of identity capital ($\eta^2 = .18$). The following were somewhat less significant as factors differentiating individuals with different identity statuses: informational style of processing identity problems, decisiveness and preference for order as indicators of the need for cognitive closure, and general satisfaction with life. Figure 10 presents the patterns of the measured variables for five subgroups of students with different identity statuses.

5. The Levels of Shame, Guilt, and Pride and the Type of Identity Status

5.1. Associations between shame, guilt, and pride in the cohorts of first-grade students

Contrary to expectations, the level of shame, guilt, and pride did not turn out to be strongly and consistently associated with the type of identity status. This effect is visible especially in Cohorts 2 and 3. The significant values of η^2 , given in Table 12, range from .04 to .10, with one statistically nonsignificant result (shame in the first measurement in Cohort 1) and one moderately high η^2 value (pride, also in the first measurement in Cohort 1). These results indicate weak associations between the three measured self-conscious emotions and the type of identity status.

In terms of the level of shame, the compared cohorts do not differ from one another very much – the level of shame was moderately low in both measurements (with arithmetic means ranging from 1.76 to 2.63 on a 1-5 scale), and the values of η^2 range from .08 to .10. The level of the sense of guilt was slightly higher, with means from 2.25 to 3.02 (scale 1-5) and the values of η^2 ranging from statistical non-significance to .09. In all cohorts, it is the level of pride that was the highest – the means range from 2.47 to 3.90 (scale 1-5) and the values of η^2 from .07 to .10, with one moderately high value of .17. Thus, the pattern is the same for each cohort (Figure 11): shame < guilt < pride.

The analysis of interrelations (Pearson's r coefficient; cf. tables of correlation matrices in Appendices 2, 3, and 4) between shame, guilt, and pride, performed separately for each cohort and separately for each subgroup with a particular

Table 12. Shame, Guilt, and Pride as Factors Differentiating Identity Status in the Three Cohorts of First-Grade Students – Measurement at the Beginning (T1) and at the End (T2) of the School Year (Arithmetic Means and Standard Deviations)

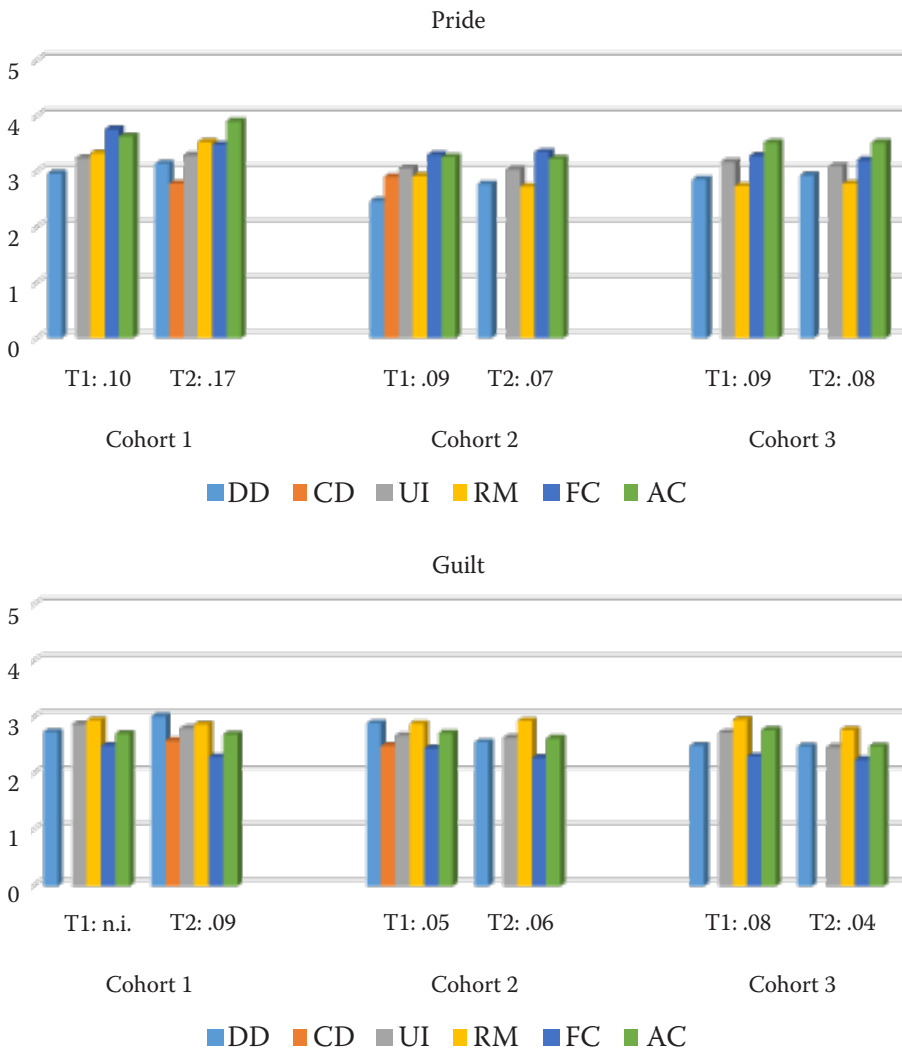
Variable	Cohort	Measurement	Type of identity status						$F, p < \eta^2$		
			Identity diffusion			Identity moratorium				Formed identity	
			Diffused diffusion	Carefree diffusion	Undifferentiated identity	Ruminative moratorium	Foreclosure	Achievement			
Shame	1	T1	2.52 (0.77) b	2.36 (0.78) a b c	2.40 (0.80) b	2.47 (0.82) b	1.83 (0.72) a	2.11 (0.77) a b	5.01, $p < .01$.09		
		T2	2.63 (0.85) c	2.06 (0.65) a b	2.28 (0.72) a b c	2.40 (0.90) b c	1.85 (0.65) a	2.02 (0.81) a b	4.84, $p < .001$.10		
	2	T1	2.54 (0.74) d	2.06 (0.65) a b	2.23 (0.76) b c	2.37 (0.72) c d	1.81 (0.62) a	2.17 (0.76) b c	10.99, $p < .001$.08		
		T2	2.24 (0.83) b	2.06 (0.65) a b	2.19 (0.70) b	2.52 (0.82) c	1.79 (0.53) a	2.11 (0.73) b	13.03, $p < .001$.08		
	3	T1	2.13 (0.68) b	2.06 (0.65) a b	2.08 (0.61) b	2.57 (0.90) c	1.76 (0.60) a	2.10 (0.75) b	14.56, $p < .001$.10		
		T2	2.14 (0.78) b	2.50 (0.72) a	2.00 (0.64) a b	2.47 (0.91) c	1.80 (0.58) a	1.97 (0.61) a b	11.91, $p < .001$.08		
Guilt	1	T1	2.74 (0.84)	2.59 (0.70) a b	2.88 (0.82)	2.95 (0.78)	2.50 (0.77)	2.71 (0.72)	2.13 <i>ns</i>		
		T2	3.02 (0.78) b	2.59 (0.70) a b	2.81 (0.74) b	2.88 (0.82) b	2.30 (0.65) a	2.70 (0.76) a b	4.37, $p < .01$.09		
	2	T1	2.90 (0.68) b	2.50 (0.72) a	2.68 (0.72) a b	2.89 (0.71) b	2.45 (0.68) a	2.72 (0.77) a b	6.45, $p < .001$.05		
		T2	2.56 (0.78) b	2.50 (0.72) a	2.64 (0.69) b	2.94 (0.76) c	2.28 (0.63) a	2.63 (0.81) b	10.32, $p < .001$.06		
	3	T1	2.50 (0.68) a b	2.50 (0.72) a	2.73 (0.71) b c	2.96 (0.89) c	2.31 (0.62) a	2.78 (0.71) b c	11.95, $p < .001$.08		
		T2	2.49 (0.81) a b	2.50 (0.72) a	2.47 (0.75) a	2.78 (0.86) b	2.25 (0.67) a	2.49 (0.71) a	5.63, $p < .001$.04		

Table 12. continuation

1	T1	2.96 (0.90) a	3.24 (0.78) ab	3.33 (0.71) abc	3.76 (0.71) c	3.63 (0.70) bc	5.87, $p < .001$.10
	T2	3.14 (0.86) ab	3.29 (0.70) b	3.53 (0.65) bc	3.48 (0.81) bc	3.90 (0.58) c	9.1, $p < .001$.17
2	T1	2.47 (0.82) a	3.06 (0.80) bc	2.92 (0.78) b	3.30 (0.92) c	3.26 (0.85) c	11.89, $p < .001$.09
	T2	2.77 (0.87) ab	3.04 (0.78) bc	2.73 (0.91) a	3.35 (0.75) d	3.23 (0.84) cd	12.36, $p < .001$.07
3	T1	2.86 (0.90) ab	3.17 (0.80) bc	2.74 (0.82) a	3.28 (0.84) cd	3.52 (0.81) d	13.40, $p < .001$.09
	T2	2.93 (0.87) ab	3.10 (0.73) b	2.78 (0.89) a	3.20 (0.86) b	3.52 (0.81) c	11.46, $p < .001$.08

Pride

identity status, showed that the three cohorts differed also in this respect. In Cohort 1 ($n = 234$; students from schools with vocational curricula) the value of Pearson's r for the association between shame and guilt ranged from .41 (*diffused diffusion*) to .85 (*ruminative moratorium*) in the first measurement and from .63 (*undifferentiated identity*) to .85 (*foreclosure*) in the second one. Secondly, in the second measurement, the correlation between shame and guilt increased in subgroups with identity diffusion and formed identity and decreased considerably in subgroups with identity moratorium. Thirdly, the associations between shame and pride as well as guilt and pride were not sta-



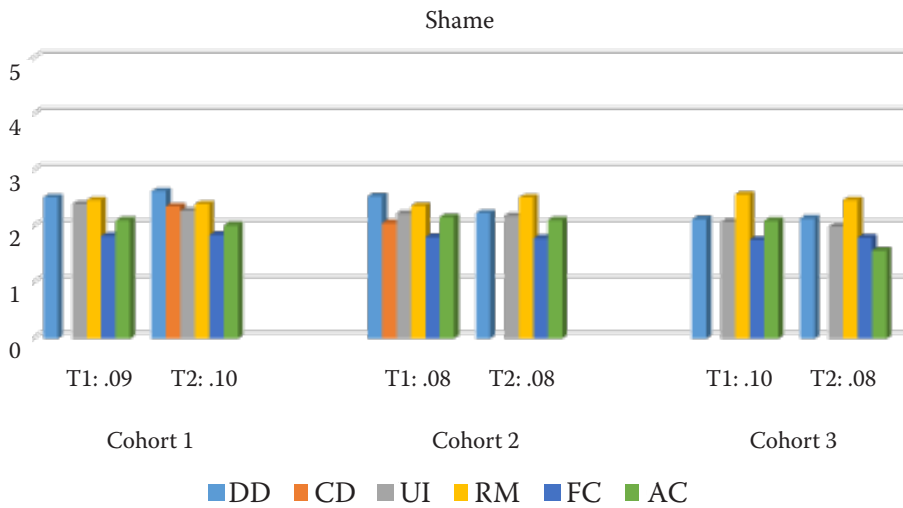


Figure 11. The level of self-conscious emotions in three cohorts of first-grade students: measurement at the beginning (T1) and towards the end (T2) of Grade 1 (the values of η^2 are given)

Note. Identity statuses: DD – diffused diffusion; CD – carefree diffusion; UI – undifferentiated identity; RM – ruminative moratorium; FC – foreclosure; AC – achievement

tistically significant in any of the subgroups of students (with different identity statuses) in the first measurement. In the second measurement, the only associations that turned out to be significant, though weak, were the inversely proportional relations between shame and pride in the subgroups with the statuses of *undifferentiated identity* ($n = 55$, $r = -.300$, $R^2 = 9\%$) and *achievement* ($n = 41$, $r = -.363$, $R^2 = 13.2\%$), and between guilt and pride only in the subgroup with the *foreclosure* status ($n = 38$, $r = -.356$, $R^2 = 12.7\%$).

In Cohort 2 ($n = 624$; students from all types of upper secondary schools) the correlation between shame and guilt ranged from .53 (*diffused diffusion*) to .68 (*foreclosure*) in the first measurement and from .54 (*foreclosure*) to .80 (*diffused diffusion*) in the second measurement. In both of these subgroups, a considerable change occurred during the school year in the strength of the association between shame and guilt – a considerable increase in the *diffused diffusion* subgroup and a considerable decrease in the *foreclosure* subgroup. In the remaining subgroups the change was not so big. Generally, an increase in the strength of the association between shame and guilt occurred in less mature subgroups – with identity diffusion and moratorium, while a decrease occurred in both subgroups with formed identity (*foreclosure* and *achievement*). The associations between shame and pride in the first measurement were of

similar moderate strength, had the same negative direction in subgroups with different identity statuses, and ranged from [-.34] to [-.47], whereas in the second measurement they were more varied in terms of strength and ranged from [-.21] to [-.56]. The biggest change over the school year occurred in the subgroup of students with *undifferentiated identity* – the value of r decreased from [-.42] ($R^2 = 18\%$) to [-.21] ($R^2 = 5\%$), which means the two self-conscious emotions became more “independent” of each other than they had been at the beginning of the first grade. The relations between guilt and pride were weaker than others; they ranged from [-.25] to [-.34] in the first measurement and from [-.23] to [-.52] in the second one. The largest change occurred in students with the status of *diffused diffusion* – in the first measurement, guilt and pride were independent of each other, whereas in the second measurement they were fairly strongly associated ($r = -.52$, $R^2 = 27\%$), which means a decrease in the sense of guilt enhanced the sense of pride.

In Cohort 3 ($n = 535$; students from all types of upper secondary schools) we found no significant changes in any of the subgroups in the strength of association between shame and guilt between the first measurement (r ranging from .60 to .75) and the second one (r ranging from .61 to .74). Associations much weaker than those between shame and guilt were found between shame and pride ([-.32] to [-.51] for the first measurement and [-.29] to [-.55] for the second measurement) and between guilt and pride ([-.21] to [-.42] for the first measurement and [-.25] to [-.34] for the second measurement). In the subgroup with the status of *undifferentiated identity*, the association between guilt and pride was nonsignificant in both measurements; in the subgroup with the *diffused diffusion* status, this association was very weak in the first measurement ($r = -.21$, $R^2 = 4\%$) and not significant in the second one. In both measurements, the strongest associations of shame and pride (Measurement 1: $-.51$, $R^2 = 26\%$; Measurement 2: $-.55$; $R^2 = 30\%$) as well as guilt and pride (Measurement 1: $-.42$, $R^2 = 17\%$; Measurement 2: $-.41$, $R^2 = 16\%$) were observed in students with the status of *ruminative moratorium*.

5.2. Associations of shame, guilt, and pride with the dimensions of identity development in the cohorts of first-grade students

The next analysis of correlations, performed for each cohort separately in Measurement 1 and Measurement 2, and separately for each of the subgroups of students with different identity statuses (cf. tables with correlation matrices in Appendices 2, 3, and 4), reveals interesting tendencies and does not allow for

rejecting the hypothesis about the significant role of self-conscious emotions in identity formation. This role, however, is visible only when the associations of pride, guilt, and shame with the intensity of the five dimensions of identity development are compared across subgroups with different degrees of identity formation (diffusion – moratorium – formed identity) as well as within these categories, that is, between subgroups of students with qualitatively different identity profiles (statuses).

In Cohort 1, composed only of students from schools with vocational curricula (functioning in the vocation-oriented environment of VSCs; $n = 234$), there were few significant associations of the five dimensions of identity development with shame, guilt, and pride, either in the first measurement or in the second one. This refers especially to the subgroups with the statuses of *diffused diffusion* and *carefree diffusion*. In the remaining subgroups these associations were weak, ranging from .27 to .45, similar in strength and direction in the first and second measurements. This refers particularly to the association between exploration in breadth and the senses of shame and guilt (moderately positive, ranging from .31 to .37), between commitment making and the senses of shame and guilt (weak and moderately negative, ranging from .29 to .36), as well as between identification with commitment and the sense of pride (moderately positive, ranging from .32 to .40). We observed no significant associations of shame, guilt, or pride with the levels of exploration in depth and ruminative exploration.

In Cohort 2 (students of all types of upper secondary schools; $n = 634$) in all subgroups with different identity statuses we observed a change between Measurements 1 and 2 in terms of both the number and the strength of associations between dimensions of identity development and the three self-conscious emotions examined. Interestingly, in the second measurement – near the end of the school year – there were fewer significant associations than in the first measurement. The exception is the subgroup with the *diffused diffusion* status, in which only two associations were significant in the first measurement (ruminative exploration and sense of guilt: $r = .32$, $R^2 = 10\%$; identification with commitment and sense of pride: $r = .26$, $R^2 = 7\%$). In the second measurement, by contrast, nearly all associations for the three forms of exploration were significant, and so was the negligible association of commitment making with the sense of shame ($r = -.21$, $R^2 = 4\%$) as well as the very weak associations of identification with commitment with the sense of shame ($r = -.17$, $R^2 = 3\%$) and with the sense of pride ($r = .22$, $R^2 = 5\%$). Except in the subgroup with the *diffused diffusion* status, we found no relations between ruminative exploration and any of the three self-conscious emotions. The fewest significant associations occurred in the subgroup with the *foreclosure* status – this was the case in both measurements.

In Cohort 3, also composed of students attending all types of upper secondary schools ($n = 535$), we observed changes in all subgroups. In the second measurement significant associations were more numerous than in the first. As in Cohort 2, the exception was the subgroup with the *foreclosure* status. Only one association turned out to be significant in the second measurement – namely, the one between identification with commitment and the sense of pride ($r = .32$, $R^2 = 10\%$). Unlike in Cohorts 1 and 2, the positive associations of ruminative exploration with the sense of shame (ranging from .20 to .35) and the sense of guilt (ranging from .21 to .28) as well as its negative associations with the sense of pride (.22 to .29) turned out to be significant. We observed only one weak correlation of exploration in depth with the sense of pride in the subgroup with *ruminative moratorium* ($r = .29$, $R^2 = 8\%$) and two correlations of pride with commitment making – also in the *ruminative moratorium* subgroup ($r = .36$, $R^2 = 13\%$) and in the subgroup with the *achievement* status ($r = .23$, $R^2 = 5\%$). The examined emotions were more often and more strongly related to exploration in breadth and ruminative exploration (in both cases, there were positive associations with shame and guilt and negative ones with pride) as well as to identification with commitment (negative associations with shame and guilt and positive ones with pride).

The analysis of the correlation matrix shows that considerably fewer significant associations occur in the subgroups with the statuses of *diffused diffusion* and *carefree diffusion* – representing the least mature category: identity diffusion – but also in the subgroups with the *foreclosure* status: identity already formed, at least temporarily. It can be said that in the first two subgroups, in which identity is only about to start transforming intensively and still has a status of “not yet / before,” specific dimensions of its development are only beginning to “link up” with self-conscious emotions, whereas the third subgroup – *foreclosure* – is already “after the changes” and these emotions play no significant role (i.e., not any longer?).

The picture is entirely different in the case of two other subgroups in Cohorts 2 and 3 (not in Cohort 1, due to the small number of significant correlations) – namely, the subgroups with the statuses of *ruminative moratorium* and *achievement*. In both, we observe not only many significant though weak associations of all the three self-conscious emotions with dimensions of identity development but also numerous changes in the number and strength of associations between the first and second measurements.

Based on the analysis of correlation matrices, it is therefore possible to formulate a few conclusions concerning the role of self-conscious emotions in identity formation, bearing in mind that the levels of all of three emotions in the tested groups were low or moderate:

- the associations of the self-conscious emotions we tested (shame, guilt, and pride) with dimensions of identity development (a) are few and weak in the precrisis phase (the statuses of *diffused diffusion* and *care-free diffusion*); (b) they are more numerous and change dynamically, even over a period shorter than one year, in the phase of experiencing identity crisis (the statuses of *undifferentiated identity* and *ruminative moratorium*); (c) they are slightly stronger (but still weak or moderate) in the postcrisis phase, in which they also either disappear (the *foreclosure* status) or remain the same, mainly as regards the sense of pride and its association with the level of identification with commitment (in both subgroups – *foreclosure* and *achievement*);
- a higher sense of shame is associated with a lower level of identification with commitment – this effect is particularly visible in the subgroups with the statuses of *diffused diffusion*, *undifferentiated identity*, and *ruminative moratorium* – as well as with exploration in breadth and ruminative exploration (positively – intensifying them a little), particularly in individuals with the *achievement* status; this indicates a dual role of the sense of shame – maladaptive and adaptive, but it is impossible here to resolve whether shame is a cause or an effect of a particular form and developmental phase of identity;
- sense of guilt is positively though weakly associated, above all, with exploration in breadth – it probably motivates a person to engage in exploratory activity;
- sense of pride is positively, though moderately, related to identification with commitment – this refers to all subgroups with different identity statuses and therefore does not play a role specific to any particular phase in the process of identity formation.

6. The Characteristics of the Three Cohorts of First-Grade Students

It turned out that the three years of first-grade students at a similar age were three groups completely different from one another in terms of psychological characteristics – and that this was the case in each type of upper secondary school. Variables such as age or gender as well as parents' education level differentiated scores only to a small degree, and so did the type of upper secondary school. Their associations with particular types of identity status found in each cohort had little strength even if they were significant. The values of Cramér's V for all significant factors ranged from .12 to .20 (cf. Table 2). Analogous

cross-sectional analyses for six groups of students of different grades (not only first grades), whose results are presented in Chapter 5 (cf. Table 4), yielded values ranging between .06 and .17. This means that these factors cannot be responsible for the configuration of results being so different in each of the tested years of first-grade students. All they can be is a kind of backdrop for the influence of other factors, and the information about the strength of their associations should be treated as information about potential risk factors and supporting factors.

6.1. The profiles of the three cohorts of first-grade students

6.1.1. THE PROFILE OF COHORT 1

In Cohort 1 (cf. Figure 5b) there were only two progressive changes – of little significance, considering the number of students they concerned (19 out of 234, which is 8.1%) – and five regressive changes in 56 students (23.9%).

The progressive changes include the transition of 10 students from the least mature status, *diffused diffusion*, to the status of *carefree diffusion* (which was absent in the first measurement) – a change of little significance, both statuses being within the same immature category, identity diffusion – and the transition of 9 students from *undifferentiated identity* to the status of *foreclosure*, involving a change of category from identity moratorium to formed identity. Yet, these changes can hardly be considered positive in the sense of being conducive to further development. The former changes little in the quality of students' psychosocial functioning, while the latter in fact closes certain possibilities of development rather than opens them up because it consists in exploratory activities being limited.

Few progressive changes occurred in this cohort, but there were as many as five regressive changes. In the case of 15 students, the initial status of *ruminative moratorium* changed to the least mature one – *diffused diffusion* – towards the end of the first grade, with a similarly high level of rumination but with low levels of exploration in breadth and in depth. Ten students from the same subgroup moved down to the one with *undifferentiated identity*. What these two regressive changes have in common is a decrease in the frequency of exploratory behaviours. Two other regressive changes were: the “fall” of as many as 20 students from the status of *achievement* (formed identity) in the first measurement to the subgroups with the statuses of *undifferentiated identity* (9 participants) and *ruminative moratorium* (11 participants); in this case, the common feature was the decrease in the frequency of commitment-

related behaviours. Finally, the fifth regressive change was the transition of 11 students from the *foreclosure* status to *undifferentiated identity*.

All these changes, generally negative, attest to the fact that in the environment in which the young people developed – home, school, peer, local, media, and other environments – opportunities adequate to their needs were lacking, and the initial diversity of identity statuses shows that these needs were considerably diverse indeed. The type of school was a factor significantly associated with the type of identity status in both measurements. In many students attending basic vocational schools and technical upper secondary schools, the initial capital in the form of the *achievement* status that they had begun first grade with was “squandered”; in students from specialised or general upper secondary schools functioning in vocational school complexes, there was an increase in the number of students with the least mature status, *diffused diffusion*. These changes were independent of gender.

6.1.2. THE PROFILE OF COHORT 2

In Cohort 2, we identified as many as six quantitatively significant progressive changes and six regressive ones (cf. Figure 6b).

All progressive changes concerning a substantial number of participants rather than individual students consisted in an “upward” transition to an identity status from the next stage and higher level in the process of identity crisis resolution. Students exhibiting identity diffusion at the beginning of the school year moved up to the identity moratorium group by the end of the year (38 students changed their identity status to *ruminative moratorium* and 36 to *undifferentiated identity*), or even to the group with the *foreclosure* status (9 students). Individuals in the crisis phase moved from *undifferentiated identity* to *foreclosure* (19 students) and *achievement* (34 students). A change also occurred in students in the postcrisis phase; namely, 15 students with the *foreclosure* status in Measurement 1 changed it to *achievement* in Measurement 2.

Regressive changes consisted mainly in the transition of a large group of 99 students to the least mature status, *diffused diffusion*; 74 of them had also exhibited identity diffusion – *carefree diffusion* status – in the first measurement, which means this was a case of change within the same category. A significant qualitative change – a change of category and a considerable “fall” – occurred in the case of 12 students with the *foreclosure* status and 13 with *ruminative moratorium* in the first measurement. Another regressive change was the transition to *undifferentiated identity* from *ruminative moratorium* (25 students, a change within the same category) and from *foreclosure* (12 students – this was a change from higher to lower category: from formed identity to identity

moratorium). The last change – within the same category – was the transition of 13 students from the status of *achievement* to *foreclosure*. What is alarming is the transition from *achievement* to less adaptive statuses in the case of 31 students.

The most disturbing group in this cohort is the 151 students (24%) who completed the first grade with the least mature status, *diffused diffusion*, and the 162 students (26%) who completed it with *undifferentiated identity*. These two subgroups amount to half of all students in this cohort. This clearly negative effect is found in students from all four types of schools (in this cohort, type of school was not a significant factor in the second measurement – cf. Table 2 and Figure 4). At the same time, 34% (216) of students in this cohort completed the first grade with formed identity: 107 students completed it with the status of *achievement* and 109 with *foreclosure*. This effect was also independent of the type of school.

Gender was a factor significantly though weakly differentiating the results (Cramér's $V = .16$ in both measurements; Table 2; cf. Table 3). Both in the group of women and in the group of men there was an increase in the proportion of participants with the status of *diffused diffusion*: from 17% to 22.9% and from 10.1% to as many as 25.5%, respectively. The number of participants with formed identity also increased in both gender groups, but the increase concerned students with different statuses: those with the *foreclosure* status in the group of men (from 17.6% to 23.9%), and those with the *achievement* status in the group of women (from 13.1% to 19.7%).

All in all, students in this cohort – regardless of school type – are highly diverse. Based on the detailed comparative analysis, it can be assumed that developmental or educational opportunities were clearly not suited to the needs of about a half of them.

6.1.3. THE PROFILE OF COHORT 3

In this cohort, six major progressive changes occurred in a total of 124 subjects (out of 535, which makes it 23.2%) and four regressive changes took place in 79 students (14.8%) (cf. Figure 7b).

All the progressive changes can be regarded as beneficial and conducive to development. Of the 36 students with the initial status of *diffused diffusion*, 24 exhibited *undifferentiated identity* and 12 had the status of *ruminative moratorium* in the second measurement. Of the fairly large group of 72 students with the initial status of *undifferentiated identity*, 20 attained the status of *ruminative moratorium* and 46 – formed identity (this includes 20 participants who attained the *foreclosure* status and 26 who attained the *achievement* status).

A change also occurred within the group with formed identity: namely, 16 students moved from *foreclosure* to *achievement*.

Regressive changes manifested themselves in the fall of 21 students from the status of *achievement* to *foreclosure* – within the same category: formed identity – and in the fall of 28 students from the *foreclosure* status to *undifferentiated identity*, of 14 others from *ruminative moratorium* also to *undifferentiated identity*, and of further 16 to *diffused diffusion*.

Towards the end of the school year, we found formed identity and identity moratorium in the same number of students (221 in both subgroups, which was 41.3%), and identity diffusion in 93 students (17.4%). The type of school was not a factor differentiating the results, and gender differentiated them to a small extent only (Cramér's $V = .15$). In the second measurement (cf. Table 3) more women (19.6%) than men (11.6%) had the status of *ruminative moratorium* and fewer women (15.6%) than men (24.7%) had the *foreclosure* status, characteristic of formed identity.

6.2. The findings of the comparative analysis of three years of first-grade students

Table 13 presents a compilation of the major characteristics of the three compared cohorts of first-grade students. What is worth noting is the number of students in each cohort and the types of schools they attended. In the larger groups (in this case, in Cohorts 2 and 3), individual differences are “blurred” or “obliterated” to a greater extent than in smaller ones. On the other hand, it is easier in such groups to observe certain more general tendencies. In our research, the “school effect” occurred in Cohort 1 (the smaller one), whereas in Cohorts 2 and 3, larger than Cohort 1, it occurred only in the first measurement, at the beginning of the first grade; effect size was the same in all three cases.

7. Concluding Remarks

All the results collected show that, although the students were at a similar age and all of them began the first grade in a given school year (which means they shared a similar kind of experience: first adaptive and then educational), it should be concluded that we are dealing with three distinct generational groups (cohorts) rather than merely with three different groups at a similar age. This is indicated by differences in the first measurement, performed shortly after the commencement of the first grade, by differences in the second measurement,

Table 13. Identity Statuses: The Significance of Changes and the Differences Regarding Correlates in the Three Cohorts of First-Grade Students

	Cohort 1: 2012/2013 <i>n</i> = 234	Cohort 2: 2013/2014 <i>n</i> = 624	Cohort 3: 2014/2015 <i>n</i> = 535
Groups tested	basic vocational schools, technical upper secondary schools, specialised/general upper secondary schools in VSC (vocational school complexes)	basic vocational schools, technical upper secondary schools, specialised/general upper secondary schools in VSC, and general upper secondary schools (not part of VSC)	basic vocational schools, technical upper secondary schools, general upper secondary schools in VSC, and general upper secondary schools (not part of VSC)
Comparison criteria			
	Gender ratio – women : men		
overall proportion	56 : 44	49 : 51	52 : 48
basic vocational schools	88 : 12	81 : 19	89 : 11
technical upper secondary schools	41 : 59	35 : 65	37 : 63
specialised/general upper secondary schools in VSC	56 : 44	49 : 51	42 : 58
general upper secondary schools (not in VSC)	–	58 : 42	52 : 48
	Change of identity status during the first year of study		
significance of change	$\chi^2 (20) = 159.52$ $p < .001$ Cramér's $V = .41$	$\chi^2 (20) = 542.81$ $p < .001$ Cramér's $V = .47$	$\chi^2 (16) = 402.34$ $p < .001$ Cramér's $V = .43$
type of changes	predominance of regressive changes	regressive & progressive changes high dynamics of changes	predominance of progressive changes high dynamics of changes
students with identity diffusion (%)	13.2 → 27.4 increase	35.8 → 24.2 decrease	20.2 → 17.4 decrease

Table 13. continuation

students with identity moratorium (%)	45.3 → 38.9 decrease	36.3 → 41.2 increase	39.8 → 41.3 no change
students with formed identity (%)	41.4 → 33.7 decrease	28.0 → 34.6 increase	40.0 → 41.3 no change
Positive changes			
students who maintained the identity achievement status (%)	45.5	57.8	61.4
students with progressive changes (%)	20.1	31.4	26.7
Negative changes			
students who maintained the ruminative moratorium status (%)	34.7	43.0	46.6
students who maintained the undifferentiated identity status (%)	40.4	48.3	43.6
students who maintained the diffused diffusion status (%)	48.4	46.4	57.4
students with regressive changes (%)	37.1	28.5	21.7
Significance of contextual determinants: T1 / T2			
type of upper secondary school	yes / yes	yes / no	yes / no
gender	no / no	yes / yes	no / yes
mother's education	no / no	no / no	no / no
father's education	no / no	no / yes	no / no

	Significance of the style of processing identity problems T1 / T2 (the value of η^2)		
diffuse style	.25 / .27	- / -	- / .27
normative style	.08 / .06	- / -	- / .10
informational style	.14 / .17	- / -	- / .12
	Significance of self-conscious emotions T1 / T2 (the value of η^2)		
pride	.10 / .17	.09 / .07	.09 / .08
guilt	<i>ns</i> / .09	.05 / .06	.08 / .04
shame	.09 / .10	.08 / .08	.10 / .08
shame rumination	- / -	.10 / .09	.08 / -
	Significance of life orientation: T1 / T2 (the value of η^2)		
moratorium orientation	.10 / .06	- / <i>ns</i>	- / .10
transitive orientation	.30 / .27	- / .22	- / .29
	Significance of identity capital T1 / T2 (the value of η^2)		
adult identity	- / -	- / -	.04 / .09
community identity	- / -	- / -	.20 / .18
	Significance of perceived quality of life T1 / T2 (the value of η^2)		
satisfaction with life	- / -	- / -	- / .11

performed towards the end of the second semester, and by the character of the changes that took place between these two measurements.

What attests to the differences is, above all, the types of changes connected with the students' identity status – initial and final. The method of cluster analysis allowed for identifying a similar number (five or six) and type of status categories in Measurements 1 and 2 in each of the comparison groups, but the character of changes – interstatus transitions – was totally different in each group. The contextual determinants (type of upper secondary school, student's gender and age, father's and mother's education) were also different. Finally, the configurations of the psychological factors measured – cognitive, emotional, and social – differed as well.

On the other hand, comparative analysis showed that what turned out to be similarly important in each group of first-grade students from the point of view of identity status was transitive life orientation (positively influencing and facilitating identity formation) and the diffuse style of processing identity problems (which had a negative influence). A comparison of the overall profiles of the groups reveals that cognitive and social variables turned out to be more significant as correlates of identity statuses than emotional factors.

Time-lag comparisons performed on first-grade students from three consecutive years revealed three important factors involved in the process of identity formation, the same as those identified as a result of cross-sectional comparisons in groups of students from Grades 1-4 (cf. Chapter 5). These are:

- diffuse style of processing identity problems: similar effect size in cross-sectional comparisons (ranging from .23 to .24) and in time-lag comparisons (.25 to .27)
- transitive life orientation: effect size ranging from .19 to .32 in cross-sectional comparisons and from .22 to .30 in time-lag comparisons
- community identity as an indicator of identity capital: effect size ranging from .22 to .23 in cross-sectional comparisons and slightly lower – from .18 to .20 – in time-lag comparisons.

The nature of differences connected with changes of identity statuses in the course of the school year and with changes in the character of associations between self-conscious emotions – shame, guilt, and pride – and dimensions of identity development indirectly indicates the different quality of the educational environment in which the students learned and satisfied their developmental needs.

Based on the obtained results, the environment that should be regarded as the least conducive to development was that which was created for first-grade students in school year 2012/2013, and the one most conducive to development was the environment created for first grades in school year 2014/2015. We

did not investigate the quality of these environments, but it can be supposed – based on the obtained pattern of results – that an important determinant of its quality from the point of view of satisfying universal as well as individual needs is the number and quality of offers (opportunities) that, on the one hand, make it possible to engage in exploratory activities, enriching and verifying the already possessed competences, and on the other hand – encourage the person to make choices and decisions and to experience their consequences, thus also making it possible to learn the ways of coping with the consequences of one's decisions. Both exploratory and decision-making processes are crucial in the process of identity formation.

Chapter 7

CHANGES OF IDENTITY STATUSES – DEVELOPMENTAL TRENDS: ANALYSIS OF THE RESULTS OF LONGITUDINAL AND CROSS-SEQUENTIAL COMPARISONS



1. Introduction

In the final, third stage, we performed a comparative analysis of the scores obtained by students at the beginning and at the end of the educational stage investigated. Because the research spanned a period of three years, it was possible to compare the identity statuses the students had when starting the first grade and when completing the third. The applied research plan also enabled us to make comparisons spanning a shorter, two-year cycle. It was additionally possible to compare two cohorts of first-grade students and two cohorts of second-grade students (cf. Table 1) from different kinds of upper secondary schools.

Of the 310 students who commenced the first-grade in the tested vocational school complexes in school year 2012/2013, only 93 (30%) remained participants in the study until the end in the final semester of the third grade – that is, they were still students, they were present at school on the research day, and consented to take part in further stages of the project; we analysed the results of only 91 of them (29%; cf. Table 2).

The percentage that the students whose scores we analysed in two-year longitudinal comparisons constituted of the initial number of students (tested in the first semester of Grade 1 or 2) is similar in Cohorts 1a (46%) and 1b (40%) as well as in Cohorts 2a (31%) and 2b (39%). For obvious reasons, this percentage is lower in the case of comparisons made for the results of students tested

Table 1. The Plan of Longitudinal (5 Times) and Cross-Sequential Comparisons (2 Times)

Grade		1	1	2		1	2
Cohort		3	1a	2a		1b	2b
<i>n</i>		91	143	111		355	243
Autumn 2012	Vocational school complexes (VSC)	↑	↑	↑			
Spring 2013				⋮			
Autumn 2013				⋮	VSC and general upper secondary schools	↑	↑
Spring 2014	Vocational school complexes (VSC)		↓	↓			
Autumn 2014				⋮			
Spring 2015	Vocational school complexes (VSC)	↓			VSC and general upper secondary schools	↓	↓

at the beginning of the first grade and three years later, near the end of upper secondary school (Cohort 3 – 29%). What we did not include in the analyses is the scores of fourth-grade technical upper secondary school students; this was because only 16 of the 189 students tested at the beginning of the first grade in school year 2012/2013 took part in all six measurements.

Table 2. The Number of Students in Longitudinal Comparisons

Cohort	Grade	Participants at T1		Participants at T4		Participants at T6		Analysed	
		Semester 1, Grade 1		Semester 2, Grade 2		Semester 2, Grade 3			
		<i>n</i>	%	<i>n</i>	% of T1	<i>n</i>	% of T1	<i>n</i>	% of T1
1a 2012/2013	1	310	100	145	47%			143	46%
1b 2013/2014	1	896	100	366	41%			355	40%
2a 2012/2013	2	354	100	112	32%			111	31%
2b 2013/2014	2	619	100	249	40%			243	39%
3 2012/2013	1	310	100			93	30%	91	29%

We performed longitudinal comparisons separately for five groups of students. These were:

- (1) Cohort 1a: Grade 1 in sch. yr 2012/13 → Grade 2 in sch. yr 2013/14
 (2) Cohort 1b: Grade 1 in sch. yr 2013/14 → Grade 2 in sch. yr 2014/15
 (3) Cohort 2a: Grade 2 in sch. yr 2012/13 → Grade 3 in sch. yr 2013/14
 (4) Cohort 2b: Grade 2 in sch. yr 2013/14 → Grade 3 in sch. yr 2014/15
 (5) Cohort 3: Grade 1 in sch. yr 2012/13 → Grade 3 in sch. yr 2014/15.

We also performed cross-sequential comparisons in order to establish whether changes of identity statuses were similar depending on or regardless of the students being in a given cohort (year) of students. We therefore compared Cohort 1a with Cohort 1b (two years of Grades 1/2) and Cohort 2a with Cohort 2b (two years of Grades 2/3).

First, we analysed the distribution of participants in the compared groups in terms of school type, gender, as well as father's and mother's education. The

Table 3. Demographic Variables in Two Cohorts of First- and Second-Grade Students of Upper Secondary Schools

Variable	Cohort 1a: Grade 1, 2012/13		Cohort 1b: Grade 1, 2013/14		Cohort 2a: Grade 2, 2012/13		Cohort 2b: Grade 2, 2013/14		Cohort 3: Grade 1, 2012/13	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
	T1–T4 comparison		T1–T4 comparison		T1–T4 comparison		T1–T4 comparison		T1–T6 comparison	
Gender	144	100.0	366	100.0	111	100.0	249	100.0	92	100.0
Women	78	54.2	179	48.9	74	66.7	128	51.4	49	53.3
Men	66	45.8	187	51.1	37	33.3	121	48.6	43	46.7
School	145	99.9	366	100.0	112	100.0	249	100.0	93	100.0
BVS	34	23.4	53	14.5	28	25.0	35	14.1	22	23.7
TEC	83	57.2	175	47.8	41	36.6	93	37.3	52	55.9
SGC (in VSC)	28	19.3	50	13.7	43	38.4	47	18.9	19	20.4
GEN (not in VSC)			88	24.0			74	29.7		
Mother's education	142	100.0	350	100.0	109	99.9	246	100.0	91	100.0
Primary	9	6.3	10	2.9	7	6.4	14	5.7	8	8.8
Vocational	61	43.0	102	29.1	37	33.9	79	32.1	34	37.4
Secondary	49	34.5	122	34.9	41	37.6	82	33.3	35	38.5
Higher	23	16.2	116	33.1	24	22.0	71	28.9	14	15.4
Father's education	141	100.0	339	100.0	108	100.0	244	99.9	90	100.0
Elementary	2	1.4	9	2.7	2	1.9	5	2.0	1	1.1
Vocational	67	47.5	132	38.9	52	48.1	100	41.0	43	47.8
Secondary	51	36.2	123	36.3	33	30.6	76	31.1	32	35.6
Higher	21	14.9	75	22.1	21	19.4	63	25.8	14	15.6

Note. There are missing data compared to the number of students given in Table 1.

data are presented in Table 3. Previous analyses concerning these variables (cf. Chapter 5 – cross-sectional comparisons, and Chapter 6 – time-lag comparisons) show that they are of no significance at all (mother’s education), of negligible significance (father’s education), or of low significance (gender and type of school) to the type of identity status found in students. Still, they are worth taking into account, especially as we are comparing the results of the same people over a shorter (two years of education) or longer (three years of education) span of time. Because, however, the subgroups of students with different identity statuses in particular cohorts in longitudinal comparisons were small, it was impossible to test the significance of differences in the frequency of different types of identity status associated with these factors.

The analysis of results will be performed in accordance with the same plan for each group of students, namely: a presentation of the types of identity status in the first (initial) measurement and in the last (final) measurement in a given cohort – for the whole cohort and according to the type of upper secondary school, will be followed by an analysis of interstatus transitions between the two measurements. Table 4 shows the percentage of students with each type

Table 4. Type of Identity Status in the Initial and Final Measurements in the Compared Cohorts

Grade and cohort	Grade 1 → 3		Grade 1 → 2				Grade 2 → 3			
	3		1a		1b		2a		2b	
Initial measurement	1st sem.		1st sem.		1st sem.		1st sem.		1st sem.	
	2012/2013		2012/2013		2013/2014		2012/2013		2013/2014	
Identity status	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Diffused diffusion	10	11.0	14	9.8	48	13.5	13	11.7	27	11.1
Carefree diffusion	–	–	–	–	77	21.7	–	–	73	30.0
Undifferentiated identity	25	27.5	36	25.2	96	27.0	29	26.1	54	22.2
Ruminative moratorium	18	19.8	33	23.1	35	9.9	23	20.7	31	12.8
Foreclosure	15	16.5	25	17.5	52	14.6	20	18.0	32	13.2
Achievement	23	25.3	35	24.5	47	13.2	26	23.4	26	10.7
Total	91	100.0	143	100.0	355	100.0	111	100.0	243	100.0
Final measurement	2nd sem.		2nd sem.		2nd sem.		2nd sem.		2nd sem.	
	2014/2015		2013/2014		2014/2015		2013/2014		2014/2015	
Identity status	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Diffused diffusion	14	15.4	24	16.8	73	20.6	15	13.5	37	15.2
Undifferentiated identity	35	38.5	44	30.8	98	27.6	30	27.0	85	35.0
Ruminative moratorium	15	16.5	16	11.2	51	14.4	16	14.4	42	17.3
Foreclosure	12	13.2	27	18.9	65	18.3	28	25.2	32	13.2
Achievement	15	16.5	32	22.4	68	19.2	22	19.8	47	19.3
Total	91	100.0	143	100.0	355	100.0	111	100.0	243	100.0

of identity status in the first (initial) measurement and in the second (final) measurement in the five analysed cohorts of students.

2. Changes of Identity Statuses in First-Grade Students of Upper Secondary Schools During Two Years of Study

2.1. First-grade cohort: 2012/2013 – 2013/2014 (vocational school complexes)

In both measurements – at the beginning of the first grade and towards the end of the second grade – we distinguished the same number of subgroups of students differing in the type of identity status (five subgroups). The levels and configuration of dimensions of identity development in subgroups with the same status were similar in both measurements. In each case, this level ranged between [-1] and [+1] standard deviation from the mean, which means the subgroups were not very internally diverse.

Small differences manifested themselves in a higher level of both commitment-related dimensions near the end of Grade 2 in the subgroup with the *achievement* status (Figure 1). However, the composition of subgroups with a given type of status changed, as shown in Table 4. The largest changes occurred in the subgroups of students with the statuses of *ruminative moratorium* and *undifferentiated identity*, both classified as belonging to the category of identity moratorium, and the smallest ones occurred in the group with the least mature form of identity, *diffused diffusion*.

As many of 71% of students with the least mature form of identity – i.e., diffusion (10 students out of 14 in the first measurement) – maintained their initial status: their status was the same towards the end of Grade 2 as it had been when they were commencing Grade 1. This means that after nearly two years of study they were still struggling with a sense of confusion, did not exhibit exploratory behaviour, and made no commitments. This is not a large group (10 students), which makes the lack of positive developmental changes all the more surprising; it is probably to some extent due to the lack of development support adequate to their needs from educators or parents.

The initial status in the category of identity moratorium, attesting that the person remains in the phase of struggle with identity crisis, was maintained in the case of 13 students (36%) with *undifferentiated identity* and 7 (21%) with *ruminative moratorium*. In the former subgroup, 10 students (28%) experienced a clear progressive change. After two years of study, they attained one of the statuses of formed identity – *foreclosure*. This may suggest that they made use

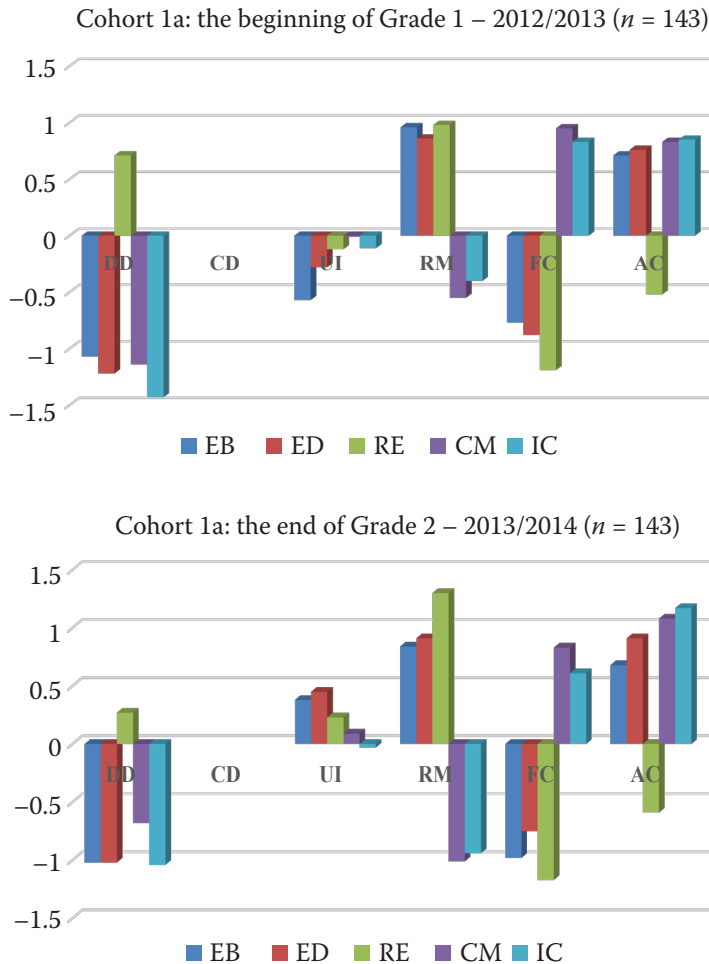


Figure 1a. Identity statuses at the beginning of Grade 1 and towards the end of Grade 2 in Cohort 1a (years 2012/2013 – 2013/2014) ($n = 143$)

Note. Types of identity status: DD – diffused diffusion; CD – carefree diffusion; UI – undifferentiated identity; RM – ruminative moratorium; FC – foreclosure; AC – achievement; dimensions of identity development: EB – exploration in breadth; ED – exploration in depth; RE – ruminative exploration; CM – commitment making; IC – identification with commitment

of the opportunities of engaging in various activities, present in the school and work environment. By contrast, in a fairly large group of students (17 out of 33, 52%) with the other status belonging to the identity moratorium category – *ruminative moratorium* – the change was regressive. At the end of Grade 2, their status was *undifferentiated identity*. This kind of change stems from a lack of opportunities for exploration, mainly in breadth, making it possible

Table 5. Interstatus Transitions in Cohort 1a in Years 2012/2013 – 2013/2014 (Grades 1-2) (n and % of Students)

Identity status: T1 measurement	Identity status: T4 measurement					Total / % of n_{tot}
	Diffused diffusion	Undifferentiated identity	Ruminative moratorium	Foreclosure	Achievement	
Diffused diffusion	10 71.4%	1 7.1%	2 14.3%	0 0%	1 7.1%	14 9.8%
Undifferentiated identity	5 13.9%	13 36.1%	4 11.1%	10 27.8%	4 11.1%	36 25.2%
Ruminative moratorium	2 6.1%	17 51.5%	7 21.2%	1 3.0%	6 18.2%	33 23.1%
Foreclosure	5 20%	4 16%	0 0%	12 48%	4 16%	25 17.5%
Achievement	2 5.7%	9 25.7%	3 8.6%	3 11.4%	18 48.6%	35 24.5%
Total / % of n_{tot}	24 16.8%	44 30.8%	16 11.2%	27 18.9%	32 22.4%	$n_{tot} = 143$

$\chi^2 (16) = 81.45, p < .001, \text{Cramér's } V = .38$

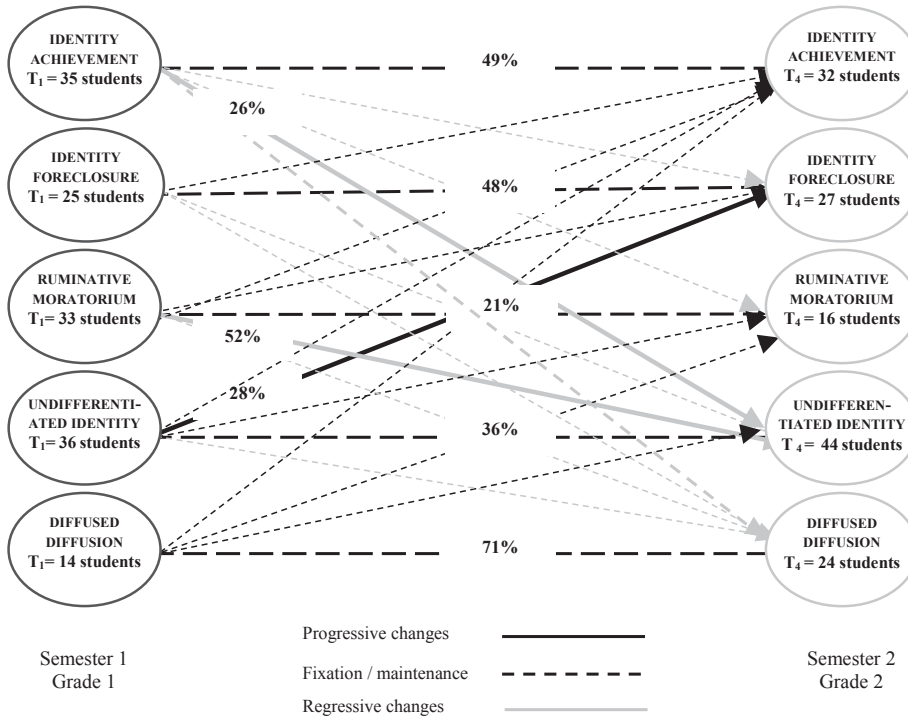


Figure 1b. Interstatus transitions in Cohort 1a in years 2012/2013 – 2013/2014 (Grades 1-2) ($n = 143$).

to obtain information necessary to make at least tentative commitments. At the same time, 6 students (out of 33, 18%) had the *achievement* status after two years of study, which was a sign that their identity crisis had been resolved. This kind of change results from the emergence of exploration opportunities as well as offers requiring decision about and commitment to their realisation.

As regards the students whose identity status at the beginning of Grade 1 suggested that they had managed to cope with identity crisis (formed identity), half of them maintained their status – *foreclosure* or *achievement* – in the second measurement, towards the end of Grade 2. Regressive changes were observed in both subgroups, however. In the case of the initial status of *foreclosure* – regressive change occurred in 9 students (out of 25), and in the case of the *achievement* status – in 14 students (out of 35).

The analysis of the character of the few progressive changes and the much more numerous regressive ones suggests a lack of appropriate support from the environment. Neither the students who began Grade 1 in the new school with immature statuses of identity diffusion nor those with identity moratorium or formed identity statuses received support adequate to their needs. The former were not provided with opportunities to enrich their experience (lack of exploration opportunities), while the latter did not have a chance to make commitments and engage in implementing the commitments made. What is the most disturbing is the increase – after two years of study and being part of the same peer group – in the number of students (from 14 to 24) with the status of *diffused diffusion* (though the level of ruminative exploration slightly decreased), experiencing numerous negative emotions and a sense of being lost or a sense of “identity confusion,” as well as the increase (from 36 to 44) in the number of students with *undifferentiated identity*.

Interesting conclusions can be drawn from a comparison of the changes of identity statuses that took place over the two years in students of different types of schools that were part of vocational school complexes (Figure 1c). These conclusions, admittedly, have little general power because the compared groups were small, but they do indicate certain tendencies.

In basic vocational schools, the number of students in the least mature identity category – diffusion – increased (nearly three times), but at the same time the number of students with the foreclosure status nearly doubled. In technical upper secondary schools, there was a 10-percent increase in the number of students with *undifferentiated identity* and, as in basic vocational schools, a nearly twofold increase in the number of students with the status of *diffused diffusion*. The most positive changes occurred in students of specialised and general upper secondary schools, as compared to those from schools with vocational curricula. The number of students with identity diffusion and with

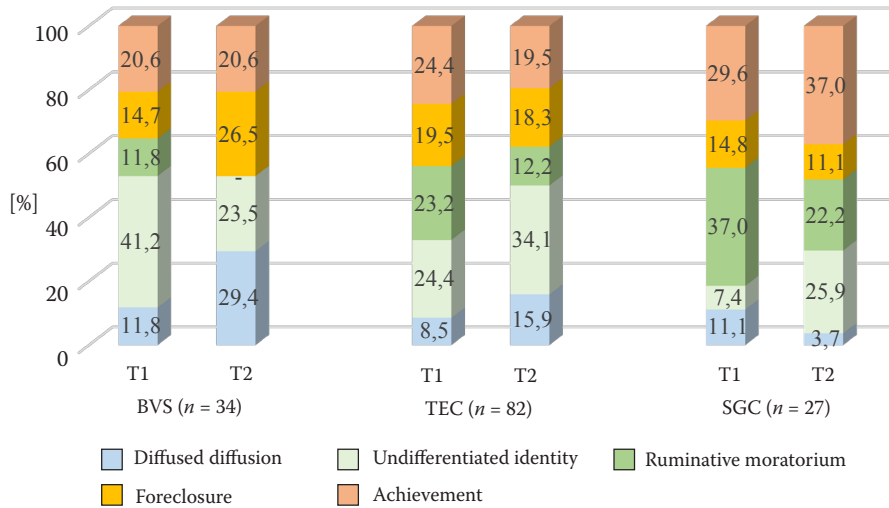


Figure 1c. Changes of identity statuses according to type of school ($n = 143$).

Note. T1 – measurement in the 1st semester of Grade 1 in sch. yr 2012/2013;

T2 – measurement in the 2nd semester of Grade 2 in sch. yr 2013/2014

the status of *ruminative moratorium* decreased, while the number of students with *undifferentiated identity* (“waiting” or “observing”) and with the *achievement* status increased.

Generally, after two years of study, students attending basic vocational schools were the most internally diverse group – much more so than at the beginning of Grade 1. In the first measurement, the status that clearly dominated in them was *undifferentiated identity*, and after two years four identity statuses occurred almost equally often. In technical upper secondary school students internal diversity decreased, and *undifferentiated identity* clearly dominated after two years of study. In students of specialised and general upper secondary schools (in VSCs), the dominant status in the first measurement was *ruminative moratorium*, and in the second one – the mature status of *achievement*. This is the only group in which, after two years, the number of students with the *diffused diffusion* status decreased.

These differences between students of different types of schools, concerning the type and character of changes over the period of two years, are confirmed by statistical analysis. In the first measurement, at the beginning of Grade 1, differences in students’ identity statuses were not significantly associated with school type ($\chi^2 = 12.3$, *ns*), whereas in the second measurement – after two years – they were significant ($\chi^2 = 18.2$, $p < .05$, Cramér’s $V = .25$). It can therefore be concluded, based on the analysis of the entire configuration of

results, that students of specialised and general upper secondary schools functioning as part of vocational school complexes received support in the process of identity formation that was the most appropriate to their needs. Support was the weakest or the least appropriate to the students' needs in the case of basic vocational schools.

2.2. First-grade cohort: 2013/2014 – 2014/2015 (all types of schools)

Analyses of the character of changes in identity statuses over two years were performed again for the next year of students, who started their first grade in school year 2013/2014. This time, the tested group included students from all types of upper secondary schools – with vocational curricula: basic vocational schools ($n = 53$) and technical upper secondary schools ($n = 169$), as well as with general (comprehensive) curricula: specialised or general upper secondary schools functioning in vocational school complexes ($n = 50$) and independently functioning general upper secondary schools ($n = 80$). In total, the group consisted of 360 students. The results obtained by 355 of them were included in cluster analysis (cf. comments on cluster analysis in Chapter 5 – section 2.1.).

The analysis of identity profile (status) for the subgroups distinguished shows (Figure 2a) that at the beginning of the first grade this was a highly diverse group, with as many as six identity statuses in it. Each phase in the process of identity formation was represented in the first measurement by two subgroups with qualitatively different identity statuses. The second difference is the decrease in the level of ruminative exploration in the second measurement, which should be regarded as a positive change from the point of view of both the students' well-being and the effectiveness of their actions. This decrease is the most clearly visible in the case of *diffused diffusion* and *achievement*.

The data in Table 6 show that by the time of the second measurement there was a significant increase in the number of students with the status of *diffused diffusion* (from 48 to 73), and this change is definitely a negative one. The second negative change was the increase in the number of students with the status of *ruminative moratorium* (from 35 to 51). We also observed two less important positive changes. The number of students with formed identity increased, and this was the case for both statuses representing that category – from 52 to 65 students for *foreclosure* and from 47 to 68 students for the *achievement* status. The analysis of the character of changes (Table 6) reveals that a similar proportion of students (from 36% for *undifferentiated identity* and 40% for *ruminative moratorium* to 47% for *achievement* and 48% for *dif-*

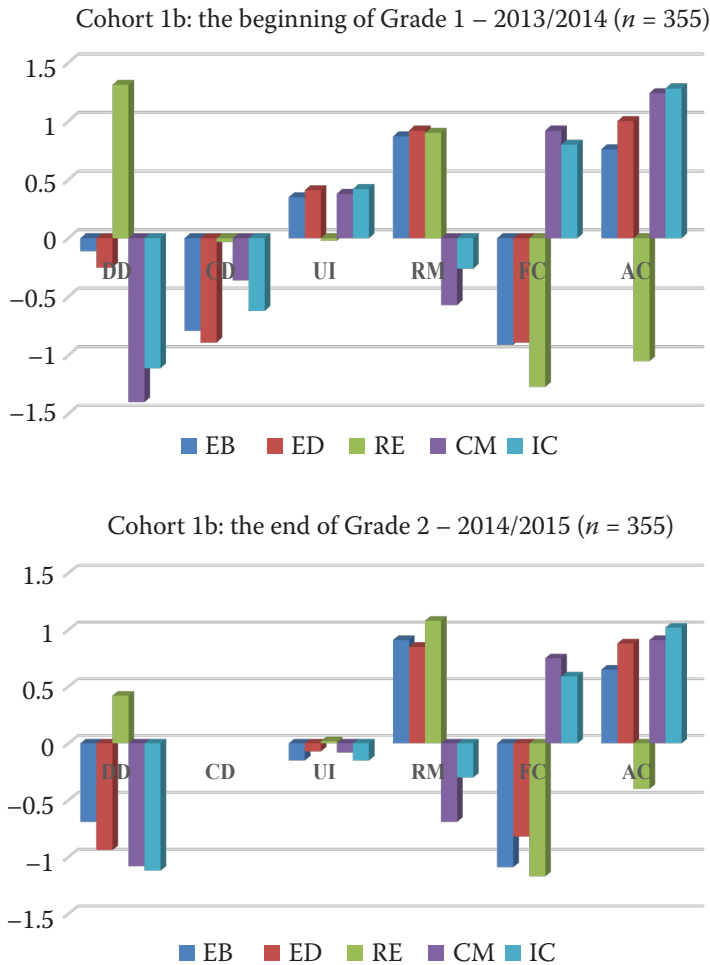


Figure 2a. Identity statuses at the beginning of Grade 1 and towards the end of Grade 2 in Cohort 1b (years 2013/2014 – 2014/2015) (n = 355)

Note. Types of identity status: DD – diffused diffusion; CD – carefree diffusion; UI – undifferentiated identity; RM – ruminative moratorium; FC – foreclosure; AC – achievement; dimensions of identity development: EB – exploration in breadth; ED – exploration in depth; RE – ruminative exploration; CM – commitment making; IC – identification with commitment

fused diffusion and *foreclosure*) maintained their initial identity statuses – the ones they had when beginning the new school.

We observed a large number of progressive changes from less formed statuses to more formed ones (thick black arrows in Figure 2b). The largest number of these individual changes occurred in 53 students whose initial status was *undifferentiated identity*. Apart from the group of 26 students who “fell”

Table 6. Interstatus Transitions in Cohort 1b in Years 2013/2014 – 2014/2015
(Grades 1-2) (n and % of Students)

Identity status: T4 measurement	Identity status: T6 measurement					Total / % of n_{tot}
	Diffused diffusion	Undiffe- rentiated identity	Ruminative morato- rium	Foreclo- sure	Achieve- ment	
Diffused diffusion	23 47.9%	8 16.7%	11 22.9%	3 6.3%	3 6.3%	48 13.5%
Carefree diffusion	26 33.8%	27 35.1%	8 10.4%	9 11.7%	7 9.1%	77 21.7%
Undifferenti- ated identity	8 8.3%	35 36.5%	12 12.5%	17 17.7%	24 25%	96 27.0%
Ruminative moratorium	5 14.3%	9 25.7%	14 40%	2 5.7%	5 14.3%	35 9.9%
Foreclosure	6 11.5%	11 21.2%	3 5.8%	25 48.1%	7 13.5%	52 14.6%
Achievement	5 10.6%	8 17%	3 6.4%	9 19.1%	22 46.8%	47 13.2%
Total / % of n_{tot}	73 20.6%	98 27.6%	51 14.5%	65 18.3%	68 19.2%	$n_{\text{tot}} = 355$

$\chi^2(20) = 133.27, p < .001, \text{Cramér's } V = .31$

from *carefree diffusion* to *diffused diffusion* in the second measurement, we found no other mass regressive changes. A few students from each subgroup with a moratorium or formed status “fell” to the status of *diffused diffusion*: 8 students from *undifferentiated identity*, 5 from *ruminative moratorium*, 5 from *achievement*, and 6 from *foreclosure*. These are small numbers compared to 355 students; besides, they are distributed over several classes, which means these were only individual students per class.

The analysis of the number of students with specific identity statuses according to school type shows that, in both measurements, this was an important factor differentiating the results. Differences connected with the type of school were somewhat larger in the first measurement ($\chi^2 = 57.67, p < .001, \text{Cramér's } V = .23$), at the beginning of Grade 1, than in the second measurement ($\chi^2 = 23.35, p < .05, \text{Cramér's } V = .15$), after nearly two years of study. The differences in the initial measurement may have stemmed from who the students of schools with vocational and general curricula were. In our study, in schools with vocational curricula there were more students whose parents had vocational education, while in specialised or general upper secondary schools more students had parents with secondary or higher education. The decrease in these differences therefore suggests an “equalising” role of school.

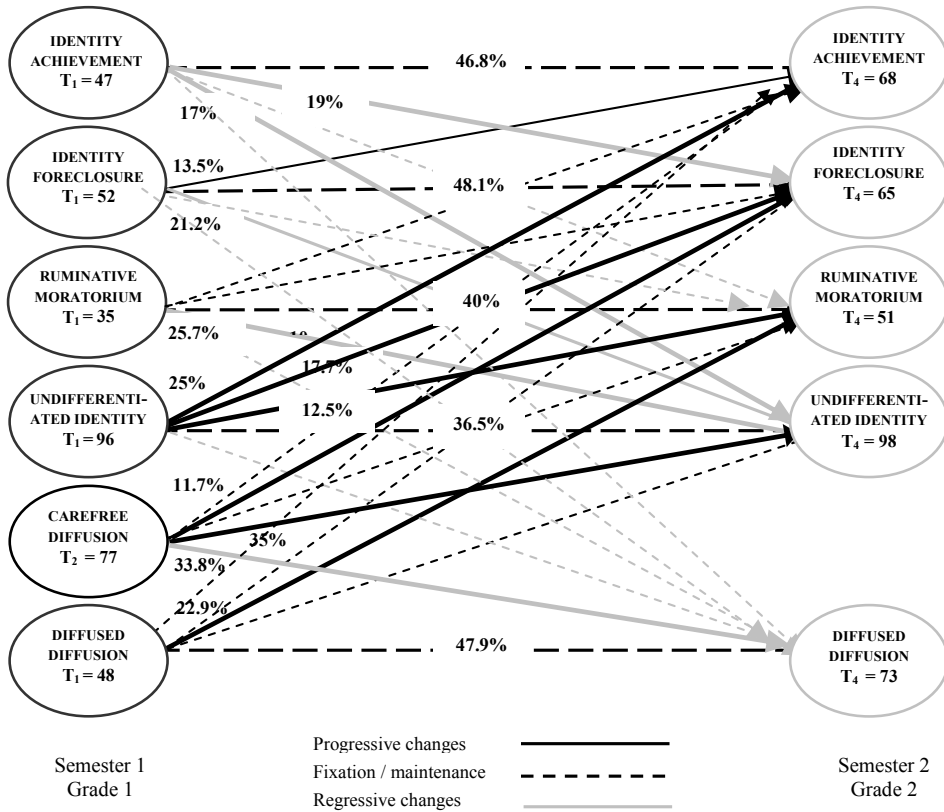


Figure 2b. Interstatus transitions in Cohort 1b in years 2013/2014 – 2014/2015 (Grades 1-2) (n = 355)

The analysis of the changes that occurred in students attending different types of schools shows (Figure 2c) that the *carefree diffusion* status, found only in the first measurement, occurred mainly in students of technical (part of VSC; 30%) and general upper secondary schools (not part of VSC; 20%). It was in the latter that the changes were the most positive – namely, there was a significant increase in the number of students with the *achievement* status, while the number of those with the statuses of *diffused diffusion*, *undifferentiated identity*, and *foreclosure* remained similar. In specialised or general upper secondary schools functioning in vocational school complexes, the changes were also positive. The high percentage of students with the *achievement* status remained high (35% in the first measurement, 30% after two years), and there was an increase in the proportion of students with the other formed identity status – *foreclosure* (from 16% to 28%). Both groups of specialised and general

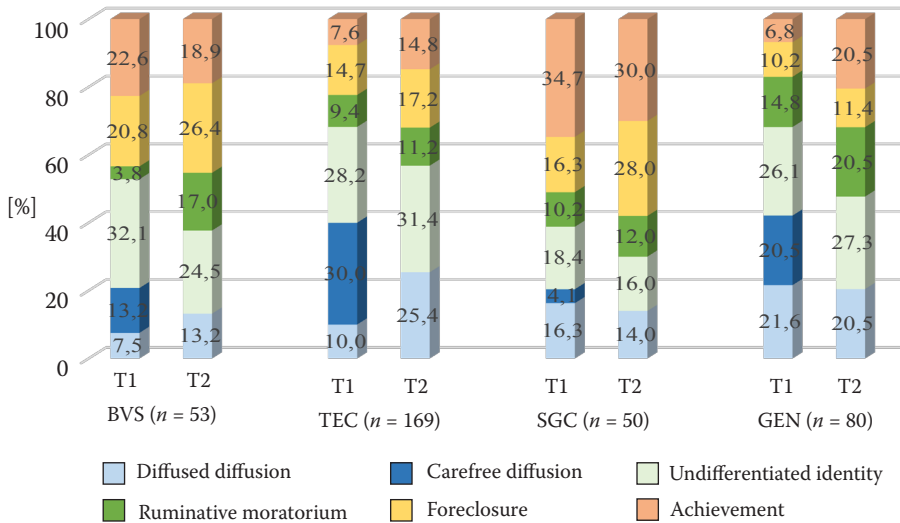


Figure 2c. Changes of identity statuses according to type of school ($n = 352$)

Note. T1 – measurement in the 1st semester of Grade 1 in sch. yr 2013/2014;

T2 – measurement in the 2nd semester of Grade 2 in sch. yr 2014/2015. Data about school type from 3 students are missing

upper secondary school students (i.e., part of VSC and independent) were much less internally diverse in the second measurement than in the first.

In schools with vocational curricula, changes were less positive from the point of view of students' well-being and functioning. Although the internal diversity of both groups slightly decreased, leaving no participants with the status of *carefree diffusion* in the second measurement, the number of students with the least mature status – *diffused diffusion* – increased in both groups: by 6% in basic vocational schools and by as much as 15% in technical upper secondary schools. Another change in both groups, though quantitatively small, was an increase in the number of students with the status of *foreclosure*.

On the whole, the direction of the changes that took place over two years in students of schools with general curricula can be said to have been more positive than in students of schools with vocational curricula. Perhaps the prospect of two further years of study in the case of technical upper secondary school students and the prospect of further (tertiary-level) education in the case of general upper secondary school students result in these two groups exhibiting moratorium identity more often than the other two, whose members will probably enter the labour market sooner, though each of them for different reasons and after a different kind of preparation for work.

2.3. Findings

A comparison of the changes that took place over two years in two consecutive years of first-grade students (Figure 3) reveals certain differences. The comparison concerns the number of students at different levels of identity formation. In the first cohort from the years 2012/2013 – 2013/2014, the change was an increase in the number of students with identity diffusion (by 7%) accompanied by a decrease in the number of students with identity moratorium (by 6%). Given that the percentage of students with formed identity remained at the same level (42% and 41%, respectively), these two changes should be regarded as negative.

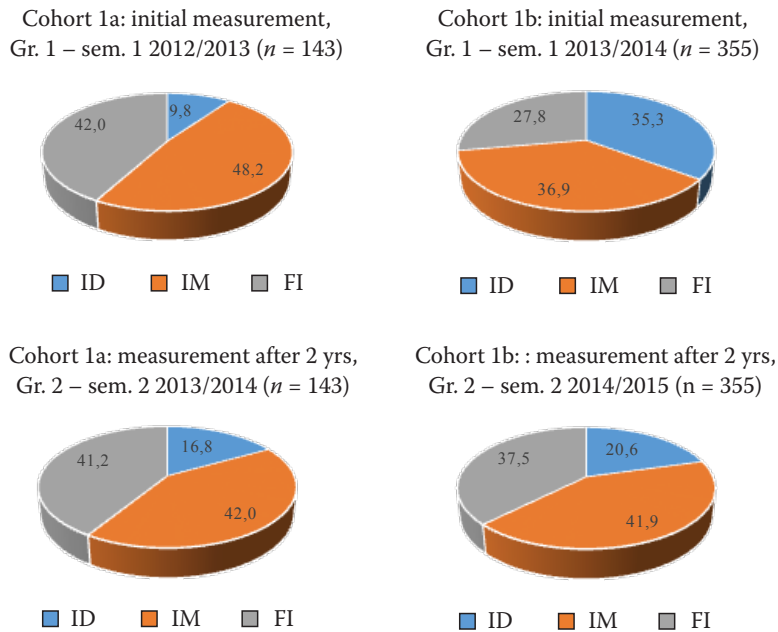


Figure 3. Types of identity status in the initial (the beginning of Grade 1) and final measurements (the end of Grade 2) in two cohorts of students

Note. Types of identity status: ID – identity diffusion; IM – identity moratorium; FI – formed identity

In the second cohort the changes were mostly positive: the number of students with identity diffusion significantly decreased (by 15%), the number of students with identity moratorium slightly increased (by 5%), and – most importantly – the number of students with formed identity increased (by nearly

10%). Previous analyses have shown that positive changes more often occurred in students from schools with general curricula (specialised and general upper secondary schools, functioning as part of vocational school complexes or independently) than in those from schools with vocational curricula (basic vocational schools and technical upper secondary schools).

3. Changes of Identity Statuses in Second-Grade Students of Upper Secondary Schools During Two Years of Study

The results obtained by two cohorts of second-grade students were analysed in the same way as those obtained by first-grade students. The first cohort was students from vocational school complexes (including the specialised and general upper secondary schools functioning in them). The second cohort included also students of general upper secondary schools that were not part of vocational school complexes. In the case of both groups, we analysed the changes that took place in identity statuses over the two years of study – in Grades 2 and 3.

3.1. Second-grade cohort: 2012/2013 – 2013/2014 (vocational school complexes)

In the first cohort, commencing the second grade in school year 2012/2013, we identified five subgroups of students with significantly different identity statuses (Figure 4a). The result was similar after two years – towards the end of the second semester of Grade 3. For students of two types of schools – basic vocational schools and specialised or general upper secondary schools – this was the final semester of study. It can therefore be said that the identity status attained by that time was the one the students had when entering the next stage of their life: adulthood.

The configurations of identity dimensions found in the five subgroups were similar in the initial measurement and in the final one, performed after two years. One of the changes that can be regarded as positive is a decrease in the level of ruminative exploration in the subgroup with the least mature status – *diffused diffusion*. The second positive change is an increase in the level of three dimensions in one of the subgroups with formed identity – the one with the *achievement* status. In this subgroup, there was a visible increase in the intensity of exploration in depth, commitment making, and identification with commitment compared to the measurement performed two years before.

As shown in Table 7, a similar proportion of students maintained their initial status in three subgroups: nearly 39% in the case of *diffused diffusion*, almost 38% in the case of *undifferentiated identity*, and 42% in the case of *achievement*. A somewhat smaller group of students (30%) maintained their initial status of *ruminative moratorium*, and a larger one (55%) maintained the *foreclosure* status. All these tendencies should be regarded as positive.

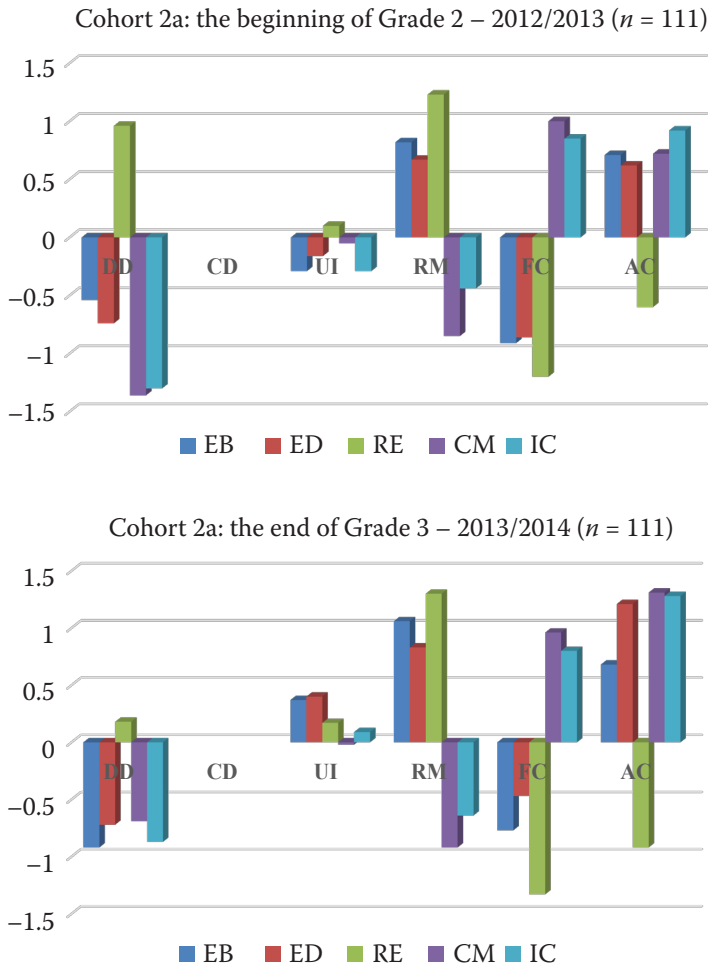


Figure 4a. Identity statuses at the beginning of Grade 2 and towards the end of Grade 3 in Cohort 2a (years 2012/2013 – 2013/2014) (n = 111)

Note. Types of identity status: DD – diffused diffusion; CD – carefree diffusion; UI – undifferentiated identity; RM – ruminative moratorium; FC – foreclosure; AC – achievement; dimensions of identity development: EB – exploration in breadth; ED – exploration in depth; RE – ruminative exploration; CM – commitment making; IC – identification with commitment

But the main positive tendency is the fact that, except in individual cases (10 students in total), there was no significant regressive change towards the least mature form of identity: diffusion. The number of students with the status of *diffused diffusion* was small and similar in both measurements – 13 in the first one and 15 in the second one (12% and nearly 14% of the whole group of 111 students, respectively). The number of students with *undifferentiated identity* was almost the same – 29 (26% of the whole group) in the first measurement and 30 (27%) in the second one. By contrast, there was a decrease in the number of students with the status of *ruminative moratorium* – from 21% in the first measurement to 14% in the second one, and a similar increase in the number of students with the *foreclosure* status – from 18% to 25%. These changes should also be considered positive.

The analysis of transitions between identity statuses over two years is interesting. In the subgroup with the status of *diffused diffusion* in the first measurement (at the beginning of Grade 2), more than half of the students (54%) changed their status to *ruminative moratorium*. Of the 29 students whose initial status was *undifferentiated identity*, as many as 14 (48%) attained statuses of formed identity. A regressive change was the transition of 6 students (23% of this group) from the status of *achievement* to *undifferentiated identity* (moratorium identity, still not fully defined). Figure 4b depicts three significant progressive changes (transitions towards more formed statuses) and two

Table 7. Interstatus Transitions in Cohort 2a in School Years 2012/2013 – 2013/2014 (Grades 2-3) (*n* and % of Students)

Identity status: T1 measurement	Identity status: T4 measurement					Total / % of n_{tot}
	Diffused diffusion	Undiffer- enti-ated identity	Rumina- tive mora- torium	Fore- closure	Achieve- ment	
Diffused diffusion	5 38.5%	0 0%	7 53.8%	1 7.7%	0 0%	13 11.7%
Undifferenti- ated identity	2 6.9%	11 37.9%	2 6.9%	8 27.6%	6 20.7%	29 26.1%
Ruminative moratorium	4 17.4%	11 47.8%	7 30.4%	1 4.3%	0 0%	23 20.7%
Foreclosure	2 10.0%	2 10.0%	0 0%	11 55%	5 25%	20 18.0%
Achievement	2 7.7%	6 23.1%	0 0%	7 26.9%	11 42.3%	26 23.4%
Total / % of n_{tot}	15 13.5%	30 27.0%	16 14.4%	28 25.2%	22 19.8%	$n_{tot} = 111$

$\chi^2(16) = 71.40, p < .001, \text{Cramér's } V = .40$

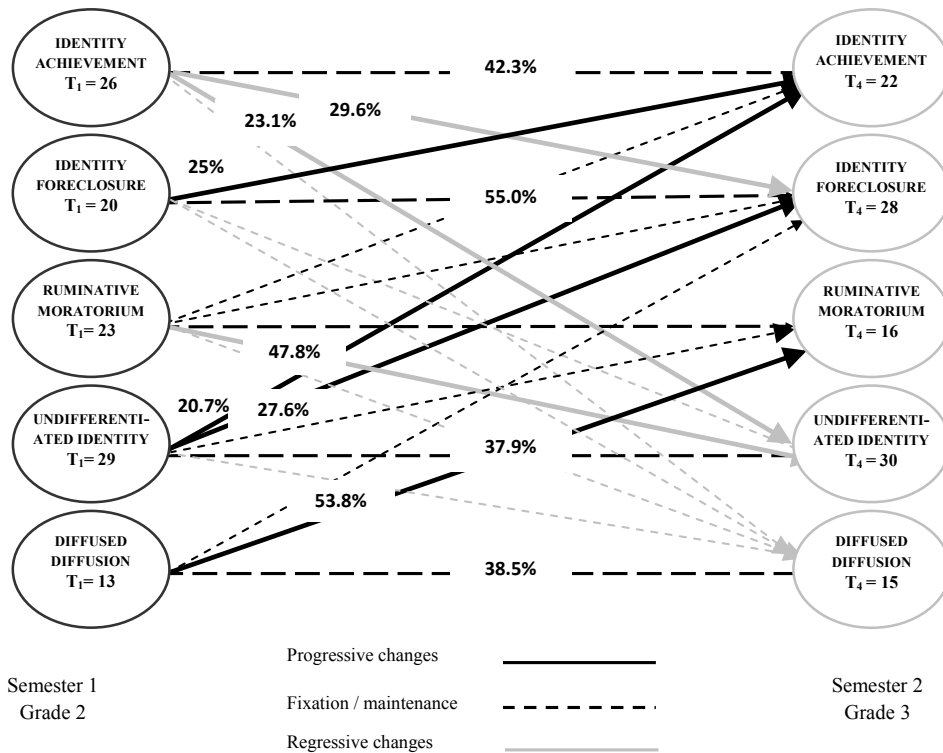


Figure 4b. Interstatus transitions in Cohort 2a in years 2012/2013 – 2013/2014 (Grades 2-3) (n = 111)

regressive ones (transitions towards less formed statuses). There are also two transitions within the same category, namely, from *foreclosure* to *achievement* (5 students) and the reverse (7 students).

As shown by the results of statistical analyses, in the first measurement – after one year of study, at the beginning of Grade 2 – students of the three types of schools functioning as part of vocational school complexes differed significantly, though moderately, in terms of identity status ($\chi^2(8) = 30.10, p < .001$, Cramér’s $V = .37$). In students of basic vocational schools the predominant statuses were *foreclosure*, *achievement* and *undifferentiated identity*. A small number of students had the status of *ruminative moratorium* and none of them had the status of *diffused diffusion*. Among technical upper secondary school students the predominant category was *undifferentiated identity*, but nearly 20% had the least mature one: *diffused diffusion*. Finally, among specialised and general upper secondary school students the predominant status was *ruminative moratorium* (nearly 40% of students).

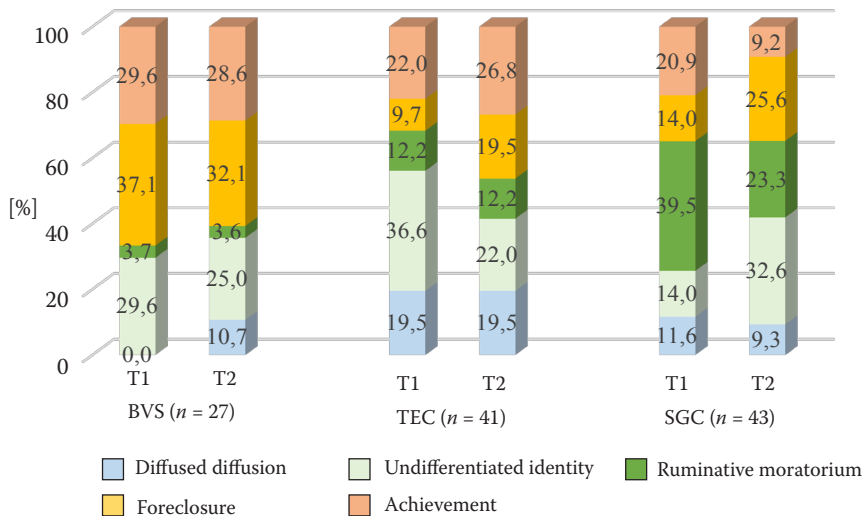


Figure 4c. Changes of identity statuses according to type of school ($n = 111$)

Note. T1 – measurement in the 1st semester of Grade 2 in sch. yr 2012/2013;

T2 – measurement in the 2nd semester of Grade 3 in sch. yr 2013/2014

In the second measurement, the differences between these three types of schools in the number of students with different identity statuses turned out not to be statistically significant ($\chi^2(8) = 12.94, ns$). It can therefore be concluded that, after two years of study, near the end of Grade 3, differences between students in terms of identity status were not caused by the type of school that they attended and that some of them – except technical upper secondary school students – were about to complete. Perhaps the factor obliterating interindividual differences was the work experience gained during the two years of study – especially as this change is particularly visible if we compare the results of the first measurement (T1) and those of the second one (T2) between the groups of specialised/general and technical upper secondary school students. As can be seen, the students were more similar to one another when completing Grade 3 than at the beginning of Grade 2, although this finding lacks firm support due to the small number of students tested in each type of school, particularly in basic vocational schools (only 27 students).

3.2. Second-grade cohort: 2013/2014 – 2014/2015 (all types of schools)

The same analysis as above was performed for the other cohort of students – from the next year, commencing their second grade at the beginning of the

research. We performed the final measurement in the same cohort of students near the end of the third grade, after four semesters of study. The group was much larger (243 students, compared to 111 in the first cohort) and more internally diverse than the first one, mainly due to the inclusion of students from general upper secondary schools that were not part of vocational school complexes.

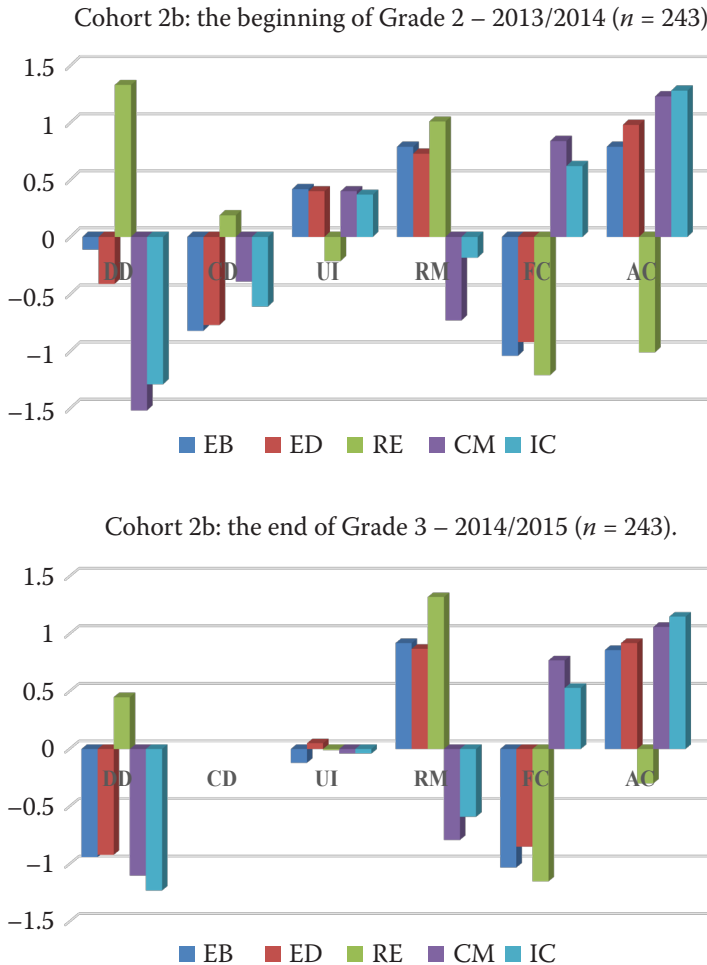


Figure 5a. Identity statuses at the beginning of Grade 2 and towards the end of Grade 3 in Cohort 2b (years 2013/2014 – 2014/2015) (n = 243)

Note. Types of identity status: DD – diffused diffusion; CD – carefree diffusion; UI – undifferentiated identity; RM – ruminative moratorium; FC – foreclosure; AC – achievement; dimensions of identity development: EB – exploration in breadth; ED – exploration in depth; RE – ruminative exploration; CM – commitment making; IC – identification with commitment

An effect of this internal diversity is the identification of six subgroups with different identity statuses in the first measurement – compared to five in the first cohort. The results of statistical analysis confirm this diversity ($\chi^2(15) = 33.70, p < .01$, Cramér's $V = .21$) of results in the first measurement, performed in the first semester of Grade 2, and show that school type was significant to which identity statuses dominated in the groups of students from basic vocational schools, technical upper secondary schools, and specialised as well as general upper secondary schools (functioning in VSCs and independent).

Figure 5a shows the configuration of identity dimensions characteristic for the subgroups of students distinguished in the initial and final measurements. In the second measurement there is no longer a subgroup with the status of *carefree diffusion*, which means the internal diversity of the group decreased. Moreover, the level of ruminative exploration decreased and the level of both adaptive forms of exploration increased slightly in the subgroup with the least mature status – *diffused diffusion*. The level of ruminative exploration decreased also in students with the status of *ruminative moratorium*. The smallest changes in the levels of identity dimensions occurred in the subgroups with the statuses of *foreclosure* and *achievement*, in which identity is already formed. All these changes can be regarded as positive from the perspective of the identity formation process.

Table 8. Interstatus Transitions in Cohort 2b in School Years 2013/2014 – 2014/2015 (Grades 2-3) (n and % of Students)

Identity status: T4 measurement	Identity status: T6 measurement					Total / % of n_{tot}
	Diffused diffusion	Undiffer- enti-ated identity	Rumina- tive mora- torium	Foreclo- sure	Achieve- ment	
Diffused diffusion	7 25.9%	9 33.3%	9 33.3%	1 3.7%	1 3.77%	27 11.1%
Carefree diffusion	22 30.1%	30 41.1%	8 11.0%	7 9.6%	6 8.2%	73 30.0%
Undifferenti- ated identity	5 9.3%	18 33.3%	11 20.4%	4 7.4%	16 29.6%	54 22.2%
Ruminative moratorium	1 3.2%	13 41.9%	14 45.2%	0 0%	3 9.7%	31 12.8%
Foreclosure	2 6.3%	10 31.3%	0 0%	15 46.9%	5 15.6%	32 13.2%
Achievement	0 0%	5 19.2%	0 0%	5 19.2%	16 61.5%	26 10.7%
Total / % of n_{tot}	37 15.2%	85 35%	42 17.3%	32 13.2%	47 19.3	$n_{\text{tot}} = 243$

$$\chi^2(20) = 128.78, p < .001, \text{Cramér's } V = .36$$

The most positive fact is the maintenance of the initial identity status of *achievement* by as many as 62% of the tested students. Also a fairly large group (47%) maintained the other status testifying to formed identity – *foreclosure*. Moratorium statuses were maintained by 45% and 33% of students, respectively, while only 26% maintained the least mature status, *diffused diffusion*. This shows that, over the four semesters of study, a substantial group of students changed their initial identity statuses to more formed and more mature ones.

Table 8 shows and Figure 5b confirms that, over the two years, many progressive changes took place in the tested group, which consisted in students changing their status from “lower,” less formed, to “higher,” more formed. There were six changes of this kind, and the number of students whose status changed towards identity moratorium or formed identity ranged from 20% to 42% depending on the initial status in a given subgroup.

The only regressive change that was clearly negative was the transition of 22 students (30% of the group at the time of the first measurement) from the

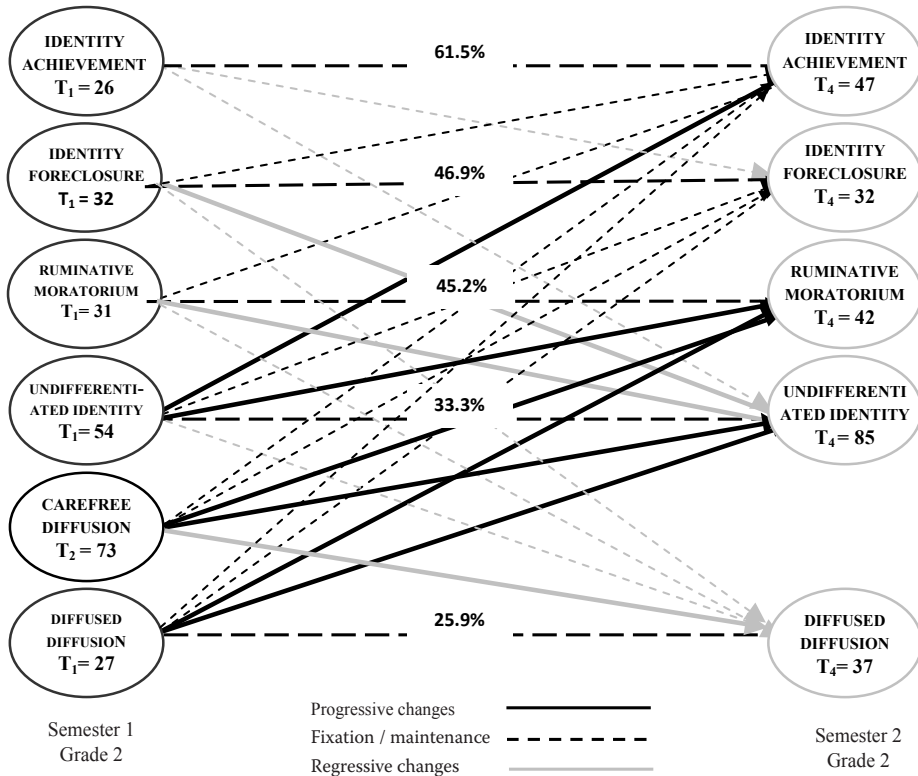


Figure 5b. Interstatus transitions in Cohort 2b in years 2013/2014 – 2014/2015 (Grades 2-3) (n = 243)

initial status of *carefree diffusion* to the status of *diffused diffusion* in the second measurement. Ten other students changed their status from *foreclosure* to *undifferentiated identity*, but even though this is a regressive change (a “fall” from formed identity to identity moratorium), it can hardly be regarded as negative in a long-term perspective. This is because it gives the person a chance to resume exploratory activities and revise the meaning of the already made commitments.

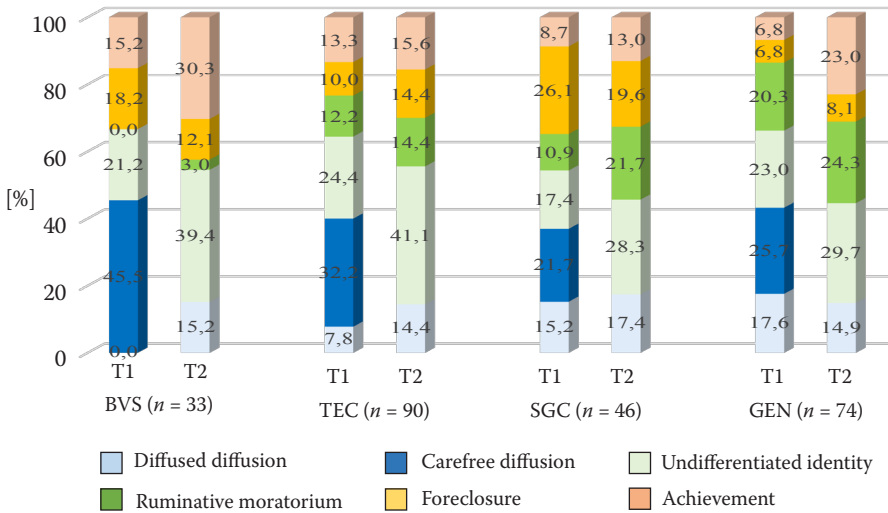


Figure 5c. Changes of identity statuses according to type of school (n = 243)

Note. T1 – measurement in the 1st semester of grade 2 in sch. yr 2013/2014;
 T2 – measurement in the 2nd semester of Grade 3 in sch. yr 2014/2015

The analysis of the types of identity statuses of students from four types of upper secondary schools shows (Figure 5c) that the relatively low but statistically significant ($\chi^2(15) = 33.70, p < .01, \text{Cramér's } V = .21$) differentiation according to school type, visible in the first measurement at the beginning of Grade 2, disappears in the measurement performed near the end of Grade 3 ($\chi^2(12) = 17.33, ns$). In the first measurement, the number of people with the status of *carefree diffusion* was the highest among the students of basic vocational and technical upper secondary schools. In the remaining two types of upper secondary schools (specialised/general in VSC vs. general not in VSC), the number of participants with the status of *diffused diffusion* was similar. Such students were two times fewer in technical upper secondary schools, and there were none of them at all in basic vocational schools. In the second measurement, in all types of schools there was a similar proportion of individuals with the

status of *diffused diffusion* (14-17%) and with formed identity (basic vocational schools – 42%, technical upper secondary schools – 43%; specialised/general upper secondary schools in VSC – 32%; general upper secondary schools not functioning as part of VSC – 31%).

3.3. Findings

The comparison of the two cohorts of second-grade students (at the beginning of the study) shows that, over the four semesters by the end of Grade 3, more changes occurred in the second cohort. There was a significant decrease (from 41% to 15%) in the number of students with identity diffusion statuses and an equally significant increase in the number of students with moratorium statuses (from 35% to 52%). In the first cohort, by contrast, the changes were slight. The number of students with identity diffusion (change by less than 2%), moratorium (change by 5%), and formed identity (change by less than 4%) did not change significantly between the first and second measurements.

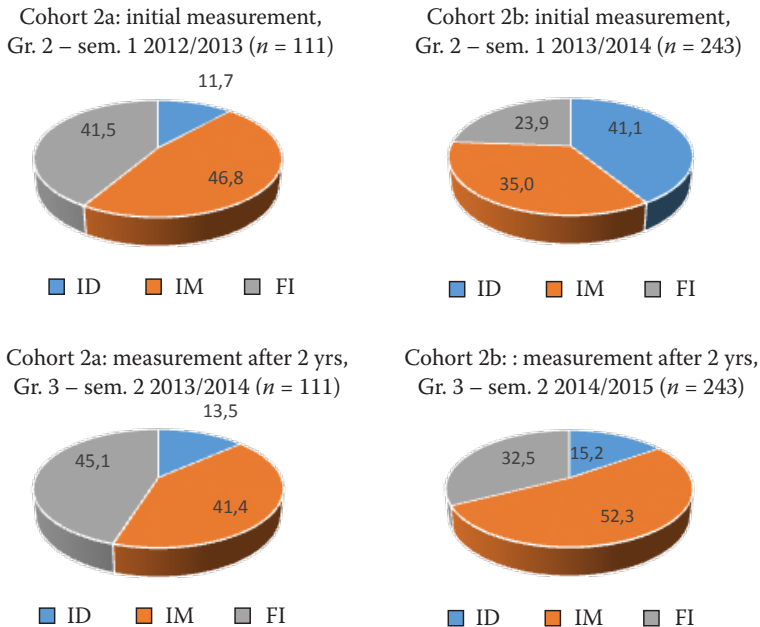


Figure 6. Types of identity status in the initial (the beginning of Grade 2) and final measurements (the end of Grade 3) in two cohorts of students

Note. Types of identity status: ID – identity diffusion; IM – identity moratorium; FI – formed identity

However, we observed the same effect in both cohorts, namely, the differentiating influence of school type only in the first measurement – at the beginning of Grade 2. Near the end of Grade 3, the type of identity status was no longer associated with the type of school in either of the cohorts. It is possible that young people's increasingly numerous and diverse out-of-school contacts acquired greater importance to their identity in the process of formation at the threshold of adulthood than school-related experience. This effect can be regarded as positive because it attested to liberation from the influence of the school and peer developmental environment.

4. Changes of Identity Statuses, Dimensions of Identity Development, and Personal Characteristics in Upper Secondary School Students During Three Years of Study (2012/2013 – 2014/2015)

To make the picture of changes complete, we performed one more analysis. It concerned those students who were tested six times – every semester from the beginning of Grade 1 in a particular school to the second semester of Grade 3. The analysis covered the results of 91 students from vocational school complexes, including 22 students of basic vocational schools, 50 attending technical upper secondary schools, and 19 attending specialised and general upper secondary schools functioning in these complexes. The group of 91 students is part of the first cohort (1a) – 143 first-grade students in school year 2012/2013 and the same 143 students in the second grade in school year 2013/2014 – whose results have been analysed in section. 2.1. In the group of students whose results obtained in Measurements 1 and 6 we analyse here, there is a similar percentage of students of each type of school from the first cohort (1a), namely: 65% from basic vocational schools, 62% from technical upper secondary schools, and 67% from specialised and general upper secondary schools.

4.1. Changes of identity statuses

Both in the first and in the last measurement, we identified five subgroups of students with different identity statuses (Figure 7a). The levels of identity dimensions and their configuration for each status were similar in the two measurements. Statistical analysis showed that neither in the first measurement ($\chi^2(8) = 5.13, ns$) nor in the last one ($\chi^2(8) = 4.79, ns$) was the type of school significant – which means it did not differentiate students' identity statuses.

The analysis of data from Table 9 shows that the number of students with statuses of *diffused diffusion*, *ruminative moratorium*, and *foreclosure* was similar in the first and last measurements. The group with *undifferentiated identity* grew by 10 students (by 11%), and the group with the *achievement* status became smaller by 8 students (9%). What is disturbing is the maintenance of the *diffused diffusion* status over the three years by 6 students (out of 10 in

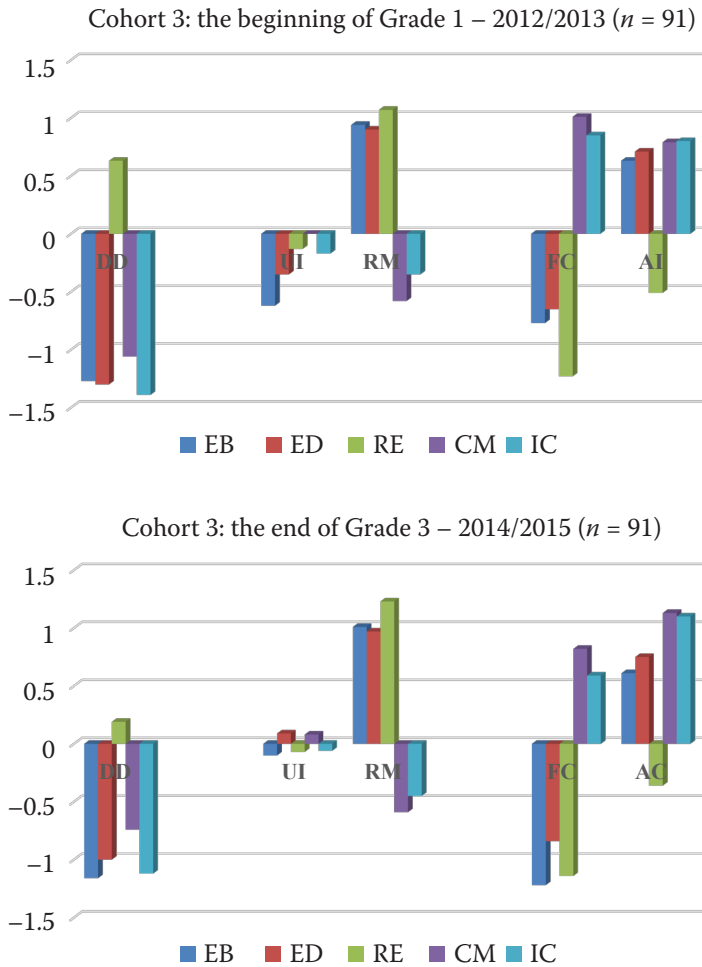


Figure 7a. Identity statuses at the beginning of Grade 1 and towards the end of Grade 3 in Cohort 3 (years 2012/2013 – 2014/2015) (n = 91).

Note. Types of identity status: DD – diffused diffusion; UI – undifferentiated identity; RM – ruminative moratorium; FC – foreclosure; AC – achievement; dimensions of identity development: EB – exploration in breadth; ED – exploration in depth; RE – ruminative exploration; CM – commitment making; IC – identification with commitment

the initial measurement) and the transition of 5 others from *undifferentiated identity* to *diffused diffusion*. In total, after three years of study and at the threshold of adulthood, 14 students (15%) had the least mature status, 50 (45%) had moratorium statuses, and only 27 (40%) had formed identity.

The only relatively large, progressive, and at the same time positive change occurred in only 4 students, who moved from *undifferentiated identity* to the status of *achievement* (Figure 7b). The negative change was the “fall” of 21 students to the status of *undifferentiated identity*; this includes 14 students who “fell” from a higher category – formed identity – to a lower one, identity moratorium. In a long-term perspective, however, this regressive change may have positive results in the form of new experience, provided that diverse opportunities and encouragements to engage in exploratory activities as well as to make choices and engage in their implementation appear in these students’ environment.

Table 9. Interstatus Transitions in Cohort 3 in Years 2012/2013 – 2014/2015
(Grades 1-3) (n and % of Students)

Identity status: T1 measurement	Identity status: T6 measurement					Total / % of n_{tot}
	Diffused diffusion	Undiffer- enti-ated identity	Rumina- tive mora- torium	Foreclo- sure	Achieve- ment	
Diffused diffusion	6 60.0%	2 20.0%	1 10.0%	1 10.0%	0 0%	10 11.0%
Undifferen- tiated identity	5 20.0%	12 48%	3 12.0%	1 4.0%	4 16%	25 27.5%
Ruminative moratorium	0 0%	7 38.9%	9 50.0%	0 0%	2 11.1%	18 19.8%
Foreclosure	2 13.3%	4 26.7%	2 13.3%	7 46.7%	0 0%	15 16.5%
Achievement	1 4.3%	10 43.5%	0 0%	3 13.0%	9 39.1%	23 25.3%
Total / % of n_{tot}	14 15.4%	35 38.5%	15 16.5%	12 13.2%	15 16.5%	91

$\chi^2(16) = 65.19, p < .001, \text{Cramér's } V = .42$

The results show that students from schools with vocational curricula (BVS, TEC) did not receive support adequate to their needs during the three years of study in their schools. The following results attest to this: (1) a large proportion of students maintained their initial status of identity moratorium (48% maintained *undifferentiated identity* and 50% maintained *ruminative moratorium*); (2) as many as 60% of students remained in the state of *diffused*

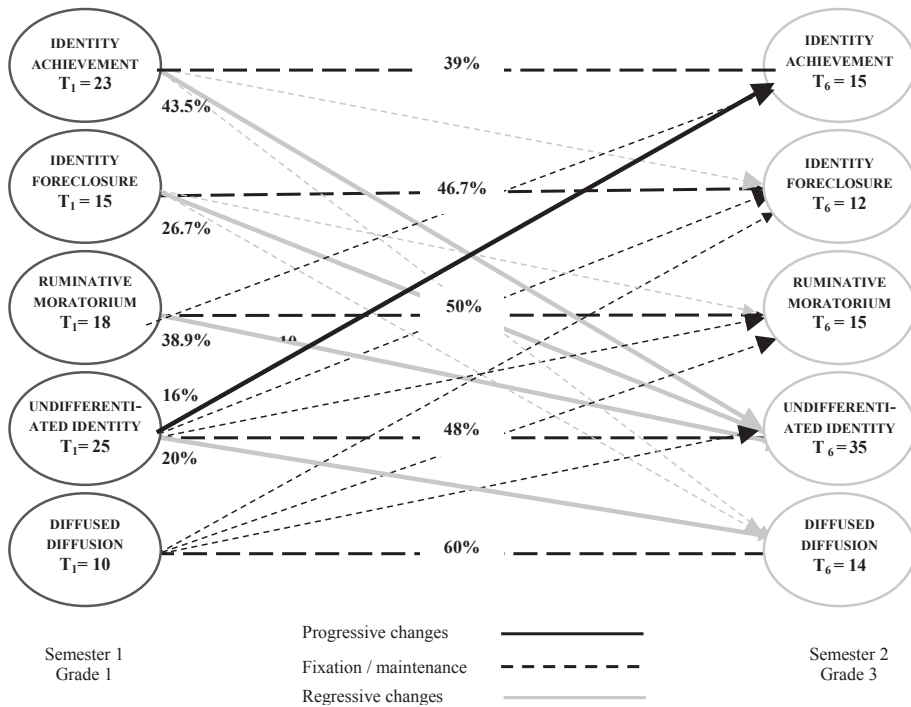


Figure 7b. Interstatus transitions in Cohort 3 in years 2012/2013 – 2014/2015 (Grades 1-3) ($n = 91$)

diffusion; (3) only 39% maintained the *achievement* status, and 47% maintained the *foreclosure* status; (4) most changes were regressive – they occurred in a total of 31 students (34% of the group of 91 students; this does not include the 3 students whose status changed from *achievement* to *foreclosure*); (5) progressive changes occurred in only 14 students (15%).

The fact that school type was unrelated to the type of identity status in the initial measurement (the beginning of study in a given school) may be evidence that the tested young people were similar to one another in terms of the degree of identity formation at the outset and internally differentiated to a similar extent regardless of what kind of school they chose. What is surprising is that school type did not differentiate identity statuses at the end of study. This may stem from the nondiversity of the opportunities provided by the school or from failure to make use of them – and these opportunities, after all, have different purposes in each of the school types analysed. The main aim of a basic vocational school is to prepare young people for work in a particular trade. A technical upper secondary school not only gives professional qualifications but also makes a person eligible to pursue higher education after passing the

school-leaving examination (*matura*). A specialised or general upper secondary school, by contrast, gives no professional qualifications. In the group we tested, the differences in the opportunities did not translate into differences in identity status at the threshold of adulthood (Figure 7c – differences in the number of students with particular statuses were not statistically significant either in the first measurement (T1) or in the last one (T2)).

Since school type was not a factor significantly differentiating the identity statuses of the tested young people, it is worth taking another look at the nature of the changes that occurred over the three years of study. Figure 8 confirms the conclusion, formulated above, that these were not positive changes. The number of students with identity diffusion did increase, though only slightly, by 4%. The number of students with identity moratorium, still seeking, increased by 8%, and the number of those with formed identity decreased by 12%. In 34% of students we observed regressive changes – 18% of this group “fell” to the category of identity diffusion and 82% to identity moratorium.

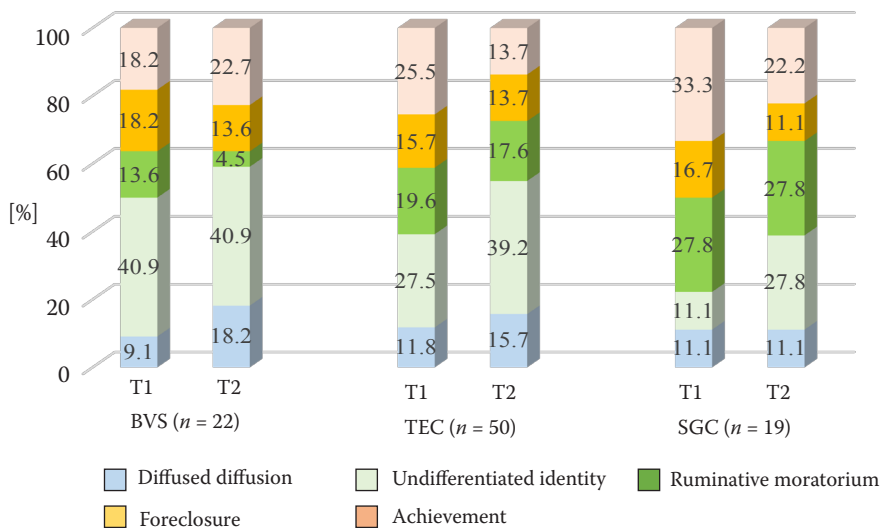


Figure 7c. Changes of identity statuses according to type of school ($n = 91$)

Note. T1 – measurement in the 1st semester of Grade 1 in sch. yr 2012/2013;

T2 – measurement in the 2nd semester of Grade 3 in sch. yr 2014/2015

The small group of 91 students and the small subgroups from three types of schools do not allow for formulating far-reaching conclusions, let alone generalising them; still, the obtained results make it worthwhile to give some thought to the quality of the offer of upper secondary schools, particularly those

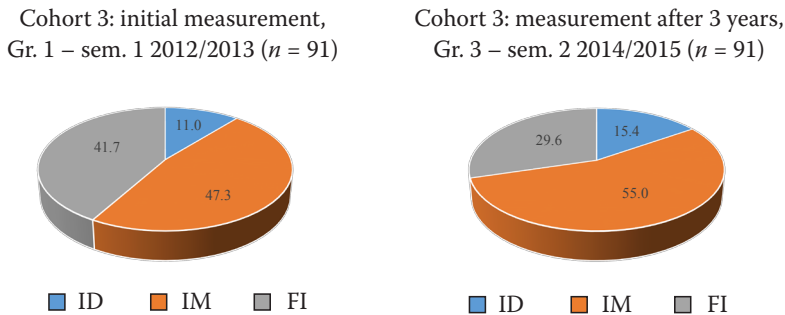


Figure 8. Types of identity status in the initial (the beginning of Grade 1) and final measurements (the end of Grade 3, after three years of study)

Note. Types of identity status: ID – identity diffusion; IM – identity moratorium; FI – formed identity

with vocational curricula (BVS, TEC), and to consider it in terms of the support provided to students in their development towards a mature form of identity.

4.2. Changes in the levels of dimensions of identity development

The results of the analysis of the changes in the type and configuration of identity profiles (statuses) that took place over two or three years of study show that these were not fundamental changes. Many students in each cohort maintained their initial identity status. We therefore performed additional analyses in order to answer the question of what changes there were, if any, in the intensity of the five dimensions of identity development (Figure 9), since a change in the intensity of a particular dimension over time is not the same as a change of the entire configuration (structure) of these dimensions.

A longitudinal analysis performed on a relatively small group of 91 students cannot lead to generalisable conclusions, especially as the compared groups of students from different types of schools were unequal in size and small (basic vocational schools: 21 students; technical upper secondary schools: 52 students; specialised or general upper secondary schools: 19 students). However, it does reveal certain trends, which is valuable from the point of view of planning further research and seeking methods of supporting young people in the process of identity development.

Figure 9 presents profiles of changes in the dimensions of identity development, separately for each type of school, over the period of three years from

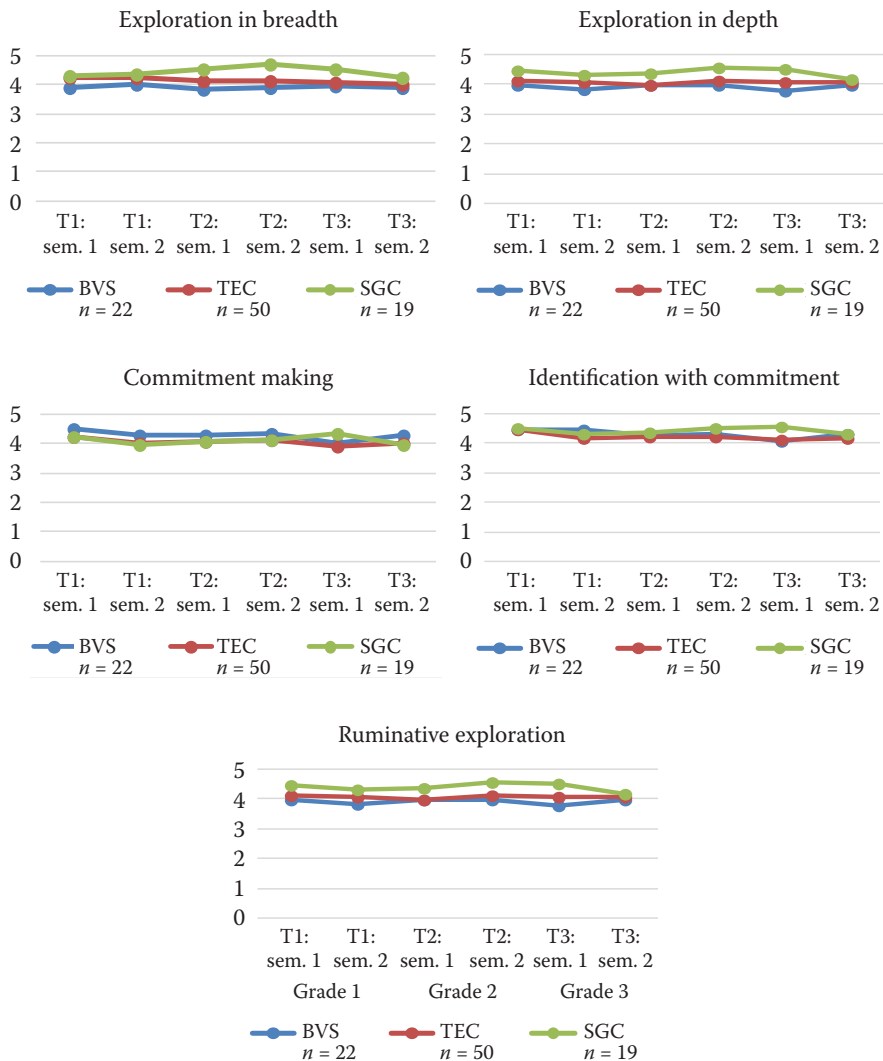


Figure 9. Profiles of changes in the levels of five dimensions of identity development in students of three types of upper secondary schools during the three-year period (T1 – T6: times of measurement)

the beginning of study in a given school (the beginning of Grade 1) until the end of Grade 3. The analysis of differences between students of different types of schools, performed separately for each of the consecutive measurements, shows that in Stages (Measurements) 1, 2, and 3 – that is, from the beginning of Grade 1 until the middle of the school year in Grade 2 – differences between the students in the levels of all five dimensions of identity development are not

statistically significant. The only exceptions is the significantly higher ($p = .024$) level of exploration in breadth at the beginning of Grade 2 (T3) in students of specialised/general upper secondary schools (4.50) compared to students of basic vocational schools (3.86), but not to those from technical upper secondary schools (4.14).

This means the students were very similar to one another at the beginning of Grade 1 of the chosen upper secondary school and that this similarity continued over the first three semesters. For the first one and a half years of study, they had similar, relatively high (on a scale from 0 to 5 points) levels of both forms of adaptive exploration (ranging from 3.86 to 4.68 for exploration in breadth and from 3.78 to 4.55 for exploration in depth), commitment making (3.96 to 4.48), and identification with commitment (4.08 to 4.54); these levels did not change significantly over this period. The level of ruminative exploration was similar in all students as well, though somewhat lower (3.04 to 3.71).

Differences between students of different types of schools appeared in the second semester of Grade 2 (T4), but they only concerned the level of adaptive exploration, which was significantly higher in students of specialised/general upper secondary schools than in their peers from technical upper secondary schools and basic vocational schools. And so, the configuration of results for exploration in breadth is as follows: SGC (4.68) > BVS (3.89) for $p = .002$ and SGC (4.68) > TEC (4.14) for $p = .014$; the results for exploration in depth are as follows: SGC (4.55) > BVS (3.96) for $p = .024$ and SGC (4.55) > TEC (4.11) for $p = .043$. As regards the levels of ruminative exploration, commitment making, and identification with commitment, students of the three types of schools did not differ significantly. Thus, in the second semester of Grade 2, students of specialised and general upper secondary schools more often engaged in exploratory activities, both orientation-focused (exploration in breadth) and analytic (exploration in depth).

The largest differences between students attending different types of schools occurred in the first semester of Grade 3 (T5). Specialised/general upper secondary school students exhibited a higher level of exploration in breadth than basic vocational school students (respectively: 4.51 and 3.97, $p = .06$), a higher level of exploration in depth than students of basic vocational schools (4.49 and 3.78, $p = .01$) and technical upper secondary schools (4.49 and 4.04, $p = .043$), a lower level of ruminative exploration than students of basic vocational schools (3.13 and 3.74, $p = .053$), as well as a slightly higher level of identification with commitment than students of basic vocational schools (4.54 and 4.08, $p = .094$) and technical upper secondary schools (4.54 and 4.11, $p = .065$). However, towards the end of Grade 3 (T6) no differences between students from different schools were statistically significant any more.

In the second step, we performed an analysis of changes in the intensity of dimensions of identity development for students of each type of school separately. The results of this analysis showed that only one of the dimensions – namely, ruminative exploration – underwent significant, though small changes over the three years of research or six semesters of study ($F = 2.31$, $p = .050$, $\eta^2 = .03$) and that these changes were significantly though weakly associated with school type ($F = 2.12$, $p = .027$, $\eta^2 = .05$).

A detailed analysis of the character of the changes that occurred in students of each type of school revealed certain differences in the dynamics of these changes. Neither in students attending basic vocational schools nor in those attending technical upper secondary schools did we observe significant changes in the intensity of exploration in breadth and in depth during the three years. In both groups there was a significant decrease in the level of commitment making between the first measurement (the beginning of Grade 1) and the fifth one (the beginning of Grade 3): in BVS students this was a decrease from 4.48 to 3.99 ($p = .024$), and in TEC students – from 4.20 to 3.19 ($p = .033$). In both groups, there was also a significant decrease in the level of identification with commitment: in the BVS group, this level decreased from 4.40 near the end of Grade 1 to 4.08 at the beginning of Grade 3 ($p = .032$), and in the TEC group – from 4.44 at the beginning of Grade 1 to 4.11 at the beginning of Grade 3 ($p = .016$). The level of ruminative exploration in both groups increased slightly but systematically from the beginning of Grade 1 until the beginning of Grade 3 (from 3.19 to 3.74 in BVS, $p = .014$, and from 3.20 to 3.51 in TEC, $p = .029$) in order to decrease subsequently from 3.74 to 3.28 in BVS ($p = .014$) and remain at a similar level in TEC ($T5 = 3.51$, $T6 = 3.37$; statistically non-significant difference).

In both groups of students from schools with vocational curricula (BVS and TEC), changes were small, and those that occurred were not positive. Over the three years there were no substantial changes in the level of exploratory activities, whose aim is to provide experiences that constitute the material building identity; the level of the unfavourable ruminative exploration increased systematically, while the level of behaviours connected with commitment making and identification with commitment decreased. All these changes show that the students were stuck in the premoratorium or moratorium phase, which means they did not complete upper secondary school with identity crisis solved in any way.

The picture is different in the case of students from schools with general (comprehensive) curricula – specialised/general upper secondary schools. In this case, changes were more numerous and their dynamics was much greater. Unlike in both groups of students from schools with vocational curricula,

where the few changes consisted in an increase in ruminative exploration and a shrinking of the area of making and implementing commitments, in this case changes concerned the domain of exploratory behaviour and did not manifest themselves in commitment-related areas at all. A characteristic feature of this group is the gradual increase in the intensity of exploration in breadth from the beginning of Grade 1 until the end of Grade 2 (from 4.31 at T1 to 4.68 at T4, $p = .040$) and its subsequent decrease (to 4.25 at T6, $p = .007$). At the same time, we observed a stable level of exploration in depth in the same period and its small but significant decrease in Grade 3 (from 4.50 at T5 to 4.16 at T6, $p = .026$). These were positive changes, since they consisted in expanding the areas of exploration (exploration in breadth) and in maintaining a similarly high level of exploration in depth over nearly the entire time of study. However, these positive changes were not accompanied by a growth of commitment-related behaviours, though in the case of identification with commitment there was a weak growth tendency between the fourth and fifth measurements (from 4.48 to 4.54) – during the transition from Grade 2 to Grade 3 – followed by a slight decrease towards the end of Grade 3 (from 4.54 to 4.28).

A comparison of the character of changes shows that in students attending vocation-oriented upper secondary schools changes occurred in the area of commitment, while in students of schools with general curricula they occurred in the area of exploration. The level of ruminative exploration, similar in all students in Grades 1 and 2, increased significantly in the first semester of Grade 3 in students of basic vocational school and technical upper secondary schools, in order to reach a similar level in all students towards the end of Grade 3.

Generally, however, the low dynamism or lack of change in some areas of identity – over the three years of study – is disturbing and, again, provokes the question of diversity and quality of educational as well as pedagogical offer in the upper secondary schools examined.

4.3. Changes in the style of processing identity problems

A comparison of the levels of the three styles of processing identity problems – measured three times: at the beginning (T1) and near the end (T2) of Grade 1 and towards the end of Grade 3 (T6) – shows that the tested students differed the most in the level of informational style ($F_{ANOVA} = 7.094$, $df = 2$, $p = .001$, $\eta^2 = .07$). In the whole tested group of 92 students, only with regard to this style was a significant change observed, namely, a decrease in its level between the beginning and the end of Grade 1 (from 4.28 to 4.02, $p < .001$), followed by a slight increase between the end of Grade 1 and the end of Grade

3 (from 4.02 to 4.17, $p = .044$). We observed no significant changes in the level of normative style (T1 = 3.09, T2 = 3.04, T6 = 3.00) of diffuse style (T1 = 2.23, T2 = 2.21, T6 = 2.24).

The next step was to check what differences, if any, there were between students from the three types of upper secondary schools considered separately in three consecutive measurements (cf. Figure 10). In each measurement, the level of normative style was similar in students of all types of schools – in basic vocational, technical upper secondary, and specialised/general upper secondary schools, respectively: 3.26, 3.06, and 2.99 at T1, 3.27, 2.99, and 2.93 at T2, and 3.14, 2.92, and 3.04 at T6. The level of informational style was similar in all students in the first and last measurements. In the second measurement, performed towards the end of Grade 1, students from basic vocational schools (3.70) exhibited a significantly lower level of this style than those from technical (4.11, $p = .014$) and specialised/general upper secondary schools (4.12, $p = .043$). The differences connected with school type were the largest in the case of diffuse style ($F_{ANOVA} = 9.141$, $df = 2$, $p < .001$). In the measurement performed at the beginning of Grade 1, basic vocational school students exhibited a much higher level of this style (2.74) compared to technical (2.04, $p = .001$) and specialised/general upper secondary school students (2.17, $p = .020$). This tendency continued also in the second measurement, near the end of Grade 1 (BVS = 2.50, TEC = 2.10, and SGC = 2.20; the only significant difference: BVS vs. TEC, $p = .023$), as well as near the end of Grade 3 (BVS = 2.67, TEC = 2.04, SGC = 2.32; for BVS vs. TEC, $p = .001$; for BVS vs. SGC, $p = .063$; for TEC vs. SGC, $p = .087$).

Thus, in the first and second measurements – at the beginning and at the end of Grade 1 – the configuration of scores on the intensity of diffuse (diffuse-avoidant) style was the same: BVS > [TEC = SGC] – which means the level of this style was the highest in basic vocational school students and significantly lower as well as similar in students of technical and specialised/general upper secondary schools. Near the end of Grade 3, one change occurred: BVS > SGC > TEC – which means basic vocational school students still scored the highest (2.67), but the similarity between students of specialised/general (2.32) and technical upper secondary schools (2.04) disappeared. Students in the last of these groups exhibited the lowest level of this maladaptive style.

The least mature, diffuse style of processing identity problems was exhibited, above all, by students of basic vocational schools, throughout the entire three-year period of study, and its intensity was similar. We did not observe any significant changes regarding the decrease in the level of this style in students of technical or specialised/general upper secondary schools. The same is true for normative style. Its moderate intensity continued throughout the

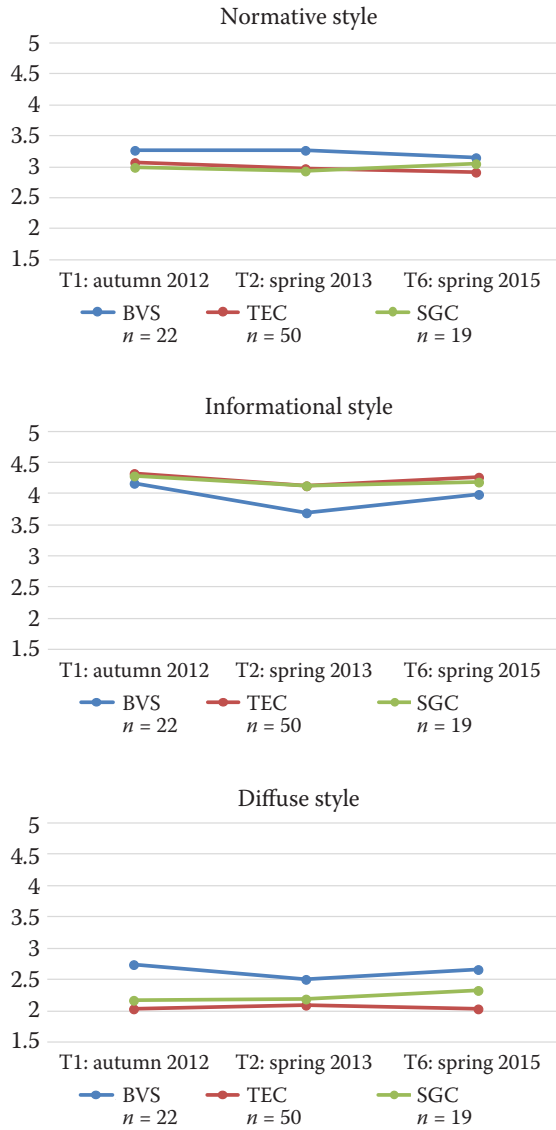


Figure 10. Profiles of changes in the levels of the three identity styles in students of three types of upper secondary schools over the three-year period (T1, T2, T6: times of measurement)

three years in all students, its level being the same regardless of the type of school.

Changes over the period of three years were observed only in the intensity of informational style. They occurred only in students from schools with voca-

tional curricula (BVS and TEC). When commencing their education in Grade 1, students of basic vocational schools were characterised by a relatively high level of this style (4.17 on a 1 to 5 scale); then there was a significant decrease to a low level near the end of the first year of study (3.70, $p < .001$) and a small increase towards the end of Grade 3 (to 3.98, $p = .065$). A similar tendency was observed in technical upper secondary school students – namely, a high level of informational style at the beginning of Grade 1 (4.32, similar to the score in specialised/general upper secondary schools – 4.29), followed by a significant decrease near the end of Grade 1 (4.12, $p = .016$) and a gentle growth tendency towards the end of Grade 3 (4.26, though the difference between T2 and T6 is not statistically significant: $p = .137$). In the group of specialised/general school students, the level of informational style remained similarly high from the beginning of Grade 1 until the end of Grade 3 (T1 = 4.29, T2 = 4.12, T6 = 4.18; the differences were not statistically significant).

The obtained results indicate that the least favourable environment from the point of view of identity development was created for students of basic vocational schools. During the three years, the intensity of normative and diffuse styles did not decrease in them, while the level of informational style (the most advantageous one), after a significant decrease near the end of Grade 1, did not even reach the initial level from the beginning of the new school by the end of Grade 3.

4.4. Changes in the levels of shame, guilt, and pride

In longitudinal analyses we obtained interesting results concerning changes in the levels of three self-conscious emotions: pride, shame, and guilt. Each of them was measured six times – in each semester of Grades 1, 2, and 3. Figure 11 reveals two interesting tendencies. The first one is the transition from the differentiation of scores depending on the type of school in initial measurements (Grade 1) to their considerably greater similarity in final measurements (Grade 3). The other tendency is a decrease in the levels of all three examined emotions – the decrease being the largest in specialised/general upper secondary school students. The decrease is especially marked in the case of pride.

And so, regardless of how different the students' levels of pride, shame, and guilt had been at the beginning of the new school, most of them had very similar scores near the end of Grade 3 – either much lower than at the beginning of the school or similar, but not higher.

In the analyses we sought an answer to the question about the factors differentiating the scores – the role of measurement time (the dynamics of

changes during the three years), school type (basic vocational: $n = 21$; technical: $n = 52$; specialised/general: $n = 19$), and the interaction of measurement and school type. As regards changes during the three years (the significance of the “measurement time” factor), the analysis of variance revealed significant changes in the levels of all the examined emotions; the decrease was the largest in the case of pride ($F = 13.79$, $p < .001$, $\eta^2 = .13$), somewhat smaller in the case of guilt ($F = 6.30$, $p < .001$, $\eta^2 = .07$), and the smallest in the case of shame ($F = 2.0$, $p = .099$, $\eta^2 = .02$). These changes had different dynamics in the case of each of the emotions – cf. Table 10.

Table 10. The Dynamics of Changes in the Levels of Pride, Guilt, and Shame ($n = 92$)

Measurement	T1		T2		T3		T4		T5		T6
Grade			1				2				3
Semester	1		2		1		2		1		2
Pride	3.41	=	3.48	>	3.01	=	3.07	=	3.13	=	3.14
			ns		.001		ns		ns		ns
Guilt	2.74	=	2.74	>	2.59	=	2.57	=	2.54	>	2.43
			ns		.007		ns		ns		.098
Shame	2.28	=	2.27	=	2.23	>	2.15	<	2.22	>	2.15
			ns		ns		.060		.071		.064

The type of school had different significance depending on the type of self-conscious emotion. In the case of shame, it was only in the second measurement (T2) that school type differentiated the scores slightly. Students of specialised/general upper secondary schools exhibited a higher level of shame than students of basic vocational schools (2.52 and 2.13, respectively, $p = .085$). In the remaining measurements, students from different schools did not differ in the intensity of this emotion.

Differences in the level of guilt between different types of schools manifested themselves in four measurements, performed when the students were in Grades 1 and 2. In each case, these were significant differences between students of basic vocational schools and specialised/general upper secondary schools, with the latter exhibiting a higher sense of guilt than the former (T1: 3.07 vs. 2.43, $p = .007$; T2: 3.06 vs. 2.43, $p = .004$; T3: 2.79 vs. 2.39, $p = .081$; T4: 2.77 vs. 2.29, $p = .057$).

As regards the level of pride, differences between students from different types of schools were observed only in Measurements 1 and 2 – in Grade 1 and towards the end of Grade 2 (T4). The level of pride both at the beginning and near the end of Grade 1 was higher in students of specialised/general upper secondary schools than in students from schools with vocational curricula

(T1: SGC = 3.72, TEC = 3.34, BVS = 3.29, $p = .062$ for SGC vs. BVS, $p = .055$ for SGC vs. TEC; T2: SGC = 3.82, TEC = 3.37, BVS = 3.43, $p = .076$ for SGC vs. BVS, $p = .017$ for SGC vs. TEC). In the fourth measurement – near the end of Grade 2 – there was a difference ($p = .074$) between students of specialised/general upper secondary schools (3.32) and basic vocational schools (2.86).

In Grade 3, there were no significant differences between students from different types of schools in terms of any of the three self-conscious emotions examined – and this was the case in both measurements.

Finally, we analysed the dynamics of changes in students' scores for each type of school separately. The level of shame was stable (flat profiles in Figure 11) over the period of three years in students of both basic vocational schools and technical upper secondary schools. In students attending specialised or general upper secondary schools, the level of shame was higher than in others in Grade 1 but decreased significantly towards the end of Grade 2 (T1: 2.51, T2: 2.52, T4: 2.23; $p = .068$ for T1 vs. T4 and $p = .044$ for T2 vs. T4), and in Grade 3 its level was similar to that which we found in the remaining students.

The level of guilt did not change significantly during the period of three years only in students of basic vocational schools. In students of technical as well as general or specialised upper secondary schools, it decreased in consecutive measurements. In students attending technical upper secondary schools, the level of guilt decreased significantly at the beginning of Grade 2 (from 2.75 at T2 to 2.59 at T3, $p = .022$) and again after the first semester of Grade 3 (from 2.61 at T5 to 2.46 at T6, $p = .035$). In students attending general or specialised upper secondary schools, the level of guilt decreased significantly at the beginning of Grade 2 (from 3.06 at T2 to 2.79 at T3, $p = .020$) and at the beginning of Grade 3 (from 2.77 at T4 to 2.49 at T5, $p = .049$).

The level of pride decreased significantly regardless of school type, and the changes had similar dynamics. This decrease occurred in all students, and at the beginning of Grade 2 the level of pride was already significantly lower than it had been near the end of Grade 1 (BVS: decrease from 3.42 to 2.97, $p = .004$; TEC: decrease from 3.37 to 2.99, $p < .001$; SGC: decrease from 3.82 to 3.13, $p < .001$). In students of technical as well as specialised or general upper secondary schools, no further significant changes in the level of pride were observed until the end of Grade 3. In basic vocational school students, there was a significant increase in the level of pride at the beginning of Grade 3 (from 2.86 to 3.19, $p = .014$). At the beginning of Grade 1, students of specialised/general upper secondary schools exhibited a significantly stronger sense of pride than their peers from schools with vocational curricula (T1: SGC = 3.72, TEC = 3.34, BVS = 3.29; $p = .062$ for SGC vs. BVS, $p = .055$ for SGC vs. TEC), whereas towards the end of Grade 3 no differences on this variable were significant any more.

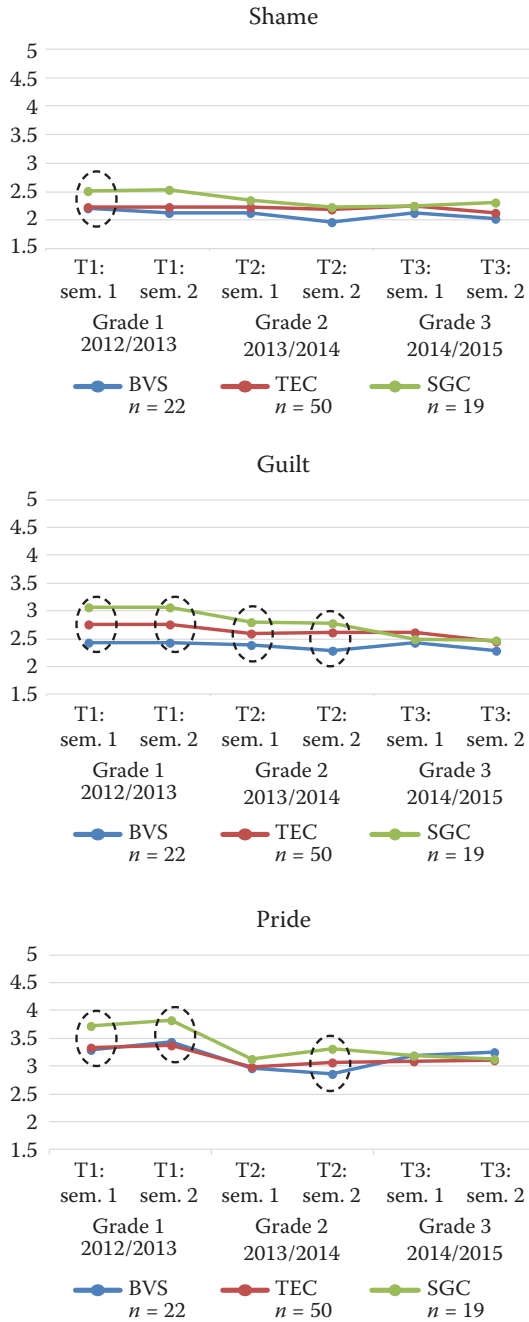


Figure 11. Profiles of changes in the levels of shame, guilt, and pride in students of three types of upper secondary schools during the three-year period (T1 – T6: times of measurement)

Figure 11 shows that, over three years of study, the level of pride decreased the most in students of specialised/general upper secondary schools.

4.5. Changes in life orientation and type of social participation

Life orientation is an important determinant of what kinds of activities individuals engage in, what attitudes accompany that engagement, and what time perspective is adopted. On the one hand, the three-year period of study in an upper secondary school is the time of completing the developmental tasks from childhood and performing the tasks of adolescence, which may be connected with the domination of moratorium orientation; on the other hand, it is the time of preparation for taking on tasks typical for adulthood, which may activate and enhance transitive orientation. At any rate, three years is a time long enough to expect a change of the dominant orientation – from moratorium to transitive. Yet, the analysis of the results does not reveal such a tendency.

We measured the intensity of both orientations three times – at the beginning (T1) and near the end (T2) of the first year in the new school and near the end of Grade 3 (T6). In each measurement the level of transitive orientation was slightly but significantly higher than the level of moratorium orientation, regardless of the type of school. It also turned out that the level of neither of the two orientations underwent significant changes during that time. This was the case with students in all the three types of schools we compared – cf. Figure 12.

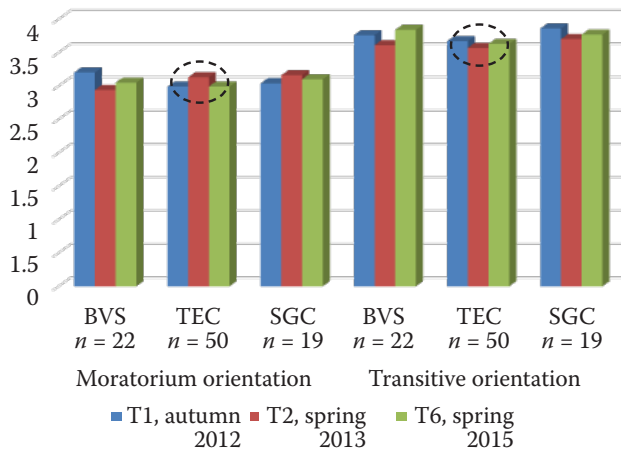


Figure 12. Patterns of changes in the levels of moratorium and transitive orientations in students of three types of upper secondary schools during the three-year period (T1, T2, T6: times of measurement)

This means the following: (1) students of different types of upper secondary schools began Grade 1 and completed Grade 3 with similar levels of both moratorium and transitive orientations (the “school type” factor differentiated the scores neither in Grade 1 nor in Grade 3); (2) in all students the level of moratorium orientation was slightly but significantly lower than the level of transitive orientation: from the beginning of the new school, the students tended to be future-oriented rather than focused on the *here and now*, which may indicate that they already had specific plans for the nearest future and that the choice of school after the completion of lower secondary school was part of this plan; (3) the level of both types of life orientation was stable during the three years of study (neither the “time” factor nor the “school type x time” interaction differentiated the scores).

We did, however, observe a weak tendency for the levels of both life orientations to change, but the tendency did not reach the threshold of statistical significance due to the small size of the tested groups. This tendency for the level of moratorium orientation to increase slightly (from 2.99 to 3.13, $n = 52$, $p = .074$) and at the same time for the level transitive orientation to go down a little (from 3.67 to 3.37, $n = 52$, $p = .084$) towards the end of Grade 1, and then the opposite tendency for moratorium orientation to decrease slightly (from 3.13 to 2.99, $p = .074$) and for transitive orientation to go slightly up (from 3.57 to 3.63, $p = .092$) towards the end of Grade 3 – was clear only in students of technical upper secondary schools (the largest of the compared groups). In the remaining two relatively small groups (19 and 21 students) the differences observed between measurements were not statistically significant.

Additionally, because it is possible based on the levels of the two types of life orientation to determine the type of social participation, we decided to check if anything changed regarding which type of social participation the students represented: integration, assimilation, segregation, or marginalisation. Figure 13 depicts the profiles (the levels of both life orientations – moratorium and transitive) of each of the four types of social participation as well as the percentages of students classified as representing each type in the initial (T1) and final measurements (T6).

The changes that took place during the three years of study were statistically significant ($\chi^2(9) = 35.61$, $p < .001$, Cramér's $V = .36$) but concerned only two types. The number of students classified into the segregative type (high moratorium orientation and low transitive orientation) decreased from 20% to 8%. The other significant change is the increase in the number of students exhibiting the assimilative type of social participation (low moratorium orientation and high transitive orientation) from 23% to 38%.

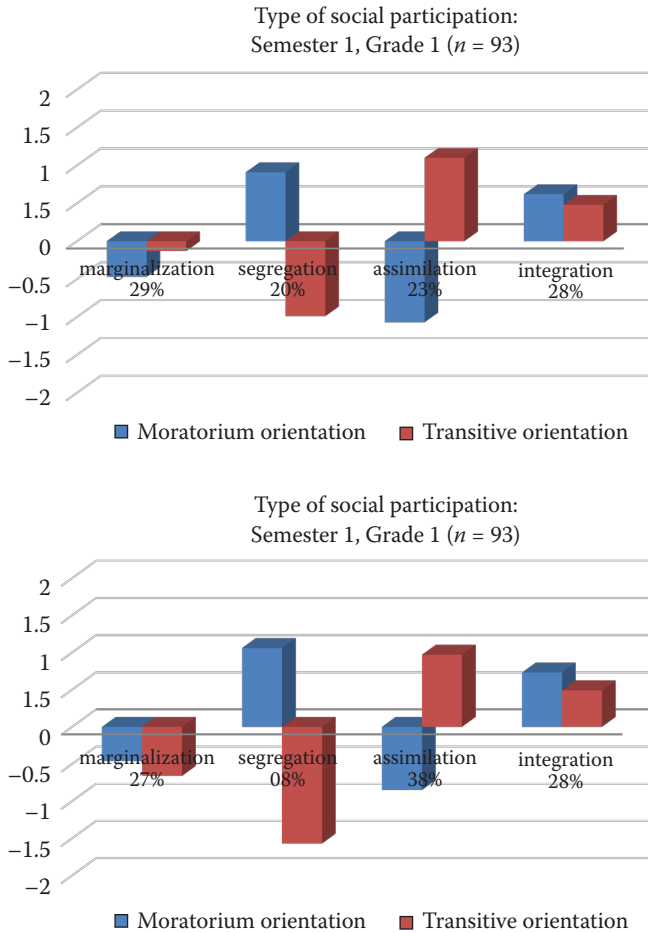


Figure 13. Types of social participation in Grades 1 and 3 ($n = 93$)

Table 11 shows that as many as 48% of students whose participation type at the beginning of Grade 1 was marginalisation, characterised by low levels of both life orientations, still exhibited this type of participation near the end of Grade 3. In the other half of students we observed progressive changes, namely: nine students (33% of this group) moved to the assimilation group (their level of transitive orientation increased) and a smaller proportion (15%) moved to the integration group (which was marked by a growth in the levels of both orientations). Of the 19 students whose participation type in the initial measurement was segregation (higher moratorium orientation and lower transitive orientation), only four maintained this initial type and 10 underwent progressive changes. In the assimilation group, more than three-fourths of

Table 11. Changes of Social Participation Types Between the First and Last Measurements (Over the Period of Three Years; $n = 93$)

Type of participation: T1 measurement	Type of participation: T6 measurement				Total
	Margin- alisation	Segregation	Assimila- tion	Integration	
Marginalisation MO- TO-	$n = 13$ 48.1%	$n = 1$ 3.7%	$n = 9$ 33.3%	$n = 4$ 14.8%	$n = 27$ 100%
Segregation MO+ TO-	$n = 5$ 26.3%	$n = 4$ 21.1%	$n = 4$ 21.1%	$n = 6$ 31.6%	$n = 19$ 100%
Assimilation MO- TO+	$n = 3$ 14.3%	$n = 0$	$n = 16$ 76.2%	$n = 2$ 9.5%	$n = 21$ 100%
Integration MO+ TO+	$n = 4$ 15.4%	$n = 2$ 7.7%	$n = 6$ 23.1%	$n = 14$ 53.8%	$n = 26$ 100%
Total	$n = 25$ 26.9%	$n = 7$ 7.5%	$n = 35$ 37.6%	$n = 26$ 28%	$n = 93$ 100%

students maintained this type of participation, and only three students “fell” to the marginalisation group. In the fourth group, with a high level of both orientations (the integration type), slightly more than a half of the students maintained their initial status; in six participants the level of moratorium orientation decreased, and so they moved to the assimilation group, and in four students there was a decrease in the levels of both orientations (marginalisation type in the final measurement).

After three years of study, what is disturbing is the considerable number of students (27%) in the marginalisation group, characterised by a low level of both moratorium and transitive orientations, as well as the fact that half of them exhibited this type of participation already at the beginning of Grade 1. Statistical analysis showed that neither in the first measurement ($\chi^2(6) = 5.48, p = .484$) nor in the last one ($\chi^2(6) = 3.73, p = .714$) did school type differentiate students in terms of which of the four participation types they represented.

4.6. Identity capital and satisfaction with life at the threshold of adulthood

In Grade 3 – at the beginning and at the end – we measured the level of two indicators of identity capital: adult identity (i.e., the sense of being an adult) and community identity (i.e., the sense of integration with and belonging to the community of adults; Figure 14). The analyses showed that (1) the levels of both indicators were similar and moderate in both the first and the second

measurements, (2) neither in the first nor in the second measurement did type of school differentiate the scores, (3) no significant change occurred over the year in the level of either of these two indicators.

The comparison of means and standard deviations showed that students of different types of schools were more similar to one another in terms of adult identity than in terms of community identity. In the latter case, students of technical and specialised/general upper secondary schools had similar scores in both measurements, while in basic vocational school students – also in both measurements – adult identity was slightly higher:

T5: BVS 3.49 ($s = 0.70$) > [TEC 3.17 ($s = .85$) = SGC 3.19 ($s = 0.68$)]

$p = .124$ for BVS vs. TEC; $p = .103$ for BVS vs. SGC

T6: BVS 3.56 ($s = 0.82$) > [TEC 3.27 ($s = 0.71$) = SGC 3.16 ($s = 0.70$)]

$p = .130$ for BVS vs. TEC; $p = .088$ for BVS vs. SGC.

This analysis only suggests the existence of a certain very weak tendency, requiring verification in research on larger groups of students.

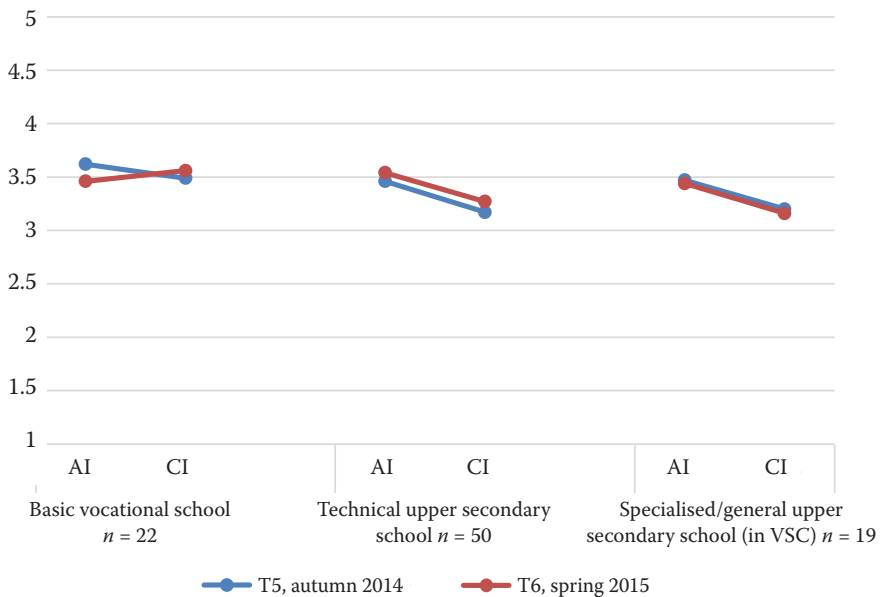


Figure 14. Patterns of changes in the levels of identity capital indicators in students of three types of upper secondary schools over a one-year period (T5 and T6: times of measurement).

Note. AI – adult identity; CI – community identity

4.7. Predictors of dimensions of identity development, indicators of identity capital, and satisfaction with life

The final step in the analysis of the results of the group of students who were tested six times was to answer the question of whether it was possible, based on the scores from the first measurement, conducted at the beginning of the new school, to predict what characteristics the students would exhibit towards the end of Grade 3 when it comes to the dimensions of identity development, the indicators of identity capital, and satisfaction with life. To identify such predictors is to identify the areas for educational work with the students.

For this purpose, we applied multiple regression analysis three times. We entered three styles of processing identity problems into the model as cognitive predictors; as emotional predictors, we entered four variables, namely: three types of self-conscious emotions (shame, guilt, and pride) and the overall indicator of difficulties in emotion regulation; finally, we entered two types of life orientation (moratorium and transitive) as social predictors. The dependent

Table 12. Results of Regression Analysis: Dimensions of Identity Development as Dependent Variables ($n = 91$): Analysis I

Predictors [T1]	Dependent variables: dimensions of identity development [T6]				
	Exploration in breadth	Exploration in depth	Ruminative exploration	Commitment making	Identification with commitment
Normative style	0.08	0.01	-0.04	0.13	0.05
Diffuse style	0.03	0.03	0.05	-0.01	-0.09
Informational style	0.24*	0.30**	0.01	0.17	0.24*
MODEL	$F = 2.26+$ $R^2 = .07$	$F = 2.28+$ $R^2 = .10$	$F = 0.63$ $R^2 = .03$	$F = 1.44$ $R^2 = .06$	$F = 1.95$ $R^2 = .08$
Diff. in em. reg.	0.16	0.05	0.12	0.07	0.02
Shame	0.13	0.14	0.12	-0.07	0.01
Guilt	-0.19	-0.08	0.01	-0.16	-0.16
Pride	0.09	0.08	-0.09	0.16	0.28*
MODEL	$F = 0.86$ $R^2 = .05$	$F = 0.46$ $R^2 = .03$	$F = 1.45$ $R^2 = .08$	$F = 1.46$ $R^2 = .08$	$F = 2.21+$ $R^2 = .11$
Moratorium orient.	0.08	-0.02	-0.05	0.05	0.05
Transitive orient.	0.05	0.10	-0.21	0.23	0.33**
MODEL	$F = 0.38$ $R^2 = .01$	$F = 0.52$ $R^2 = .02$	$F = 1.97$ $R^2 = .03$	$F = 1.78$ $R^2 = .06$	$F = 3.29^*$ $R^2 = .10$

Note. + $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

variables were the following: in the first analysis – five dimensions of identity development (Table 12), in the second analysis – two indicators of identity capital (Table 13), and in the third analysis – one overall indicator of satisfaction with life (Table 13).

Table 13. Results of Regression Analysis: Dimensions of Identity Capital as Dependent Variables ($n = 91$): Analyses II and III

Predictors [T1]	Dependent variables		
	Dimensions of identity capital [T6]		Satisfaction with life [T6]
	Adult identity	Community identity	
	Analysis II		Analysis III
Normative style	-0.09	-0.21	0.13
Diffuse style	0.04	0.50	0.01
Informational style	0.40***	0.23	0.13
MODEL	$F = 4.43^{**}$ $R^2 = .17$	$F = 1.49$ $R^2 = .07$	$F = 0.85$ $R^2 = .04$
Diff. in emot. reg.	-0.20	0.01	0.18
Shame	0.02	-0.02	-0.33*
Guilt	-0.08	-0.13	-0.03
Pride	0.28**	0.07	0.23
MODEL	$F = 2.99^*$ $R^2 = .15$	$F = 0.67$ $R^2 = .04$	$F = 3.08^*$ $R^2 = .15$
Moratorium orient.	0.19	0.16	0.21
Transitive orient.	0.36**	0.34**	0.11
MODEL	$F = 3.74^*$ $R^2 = .11$	$F = 3.32^*$ $R^2 = .10$	$F = 1.03$ $R^2 = .03$

+ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

The results of all three analyses show that, of the nine factors treated as predictors, none turned out to be significant to all three groups of factors treated as dependent variables. Those that did turn out to be significant were similarly but weakly associated with dependent variables – the effects of development during the three years of study. The strongest associations were those of the informational style of processing identity problems ($R^2 = .17$) and the sense of pride ($R^2 = .15$) with adult identity and those between the sense of shame and low satisfaction with life ($R^2 = .15$).

The results show that, based on how intensive informational style is at the beginning of the first grade, it is to some extent possible to predict the levels

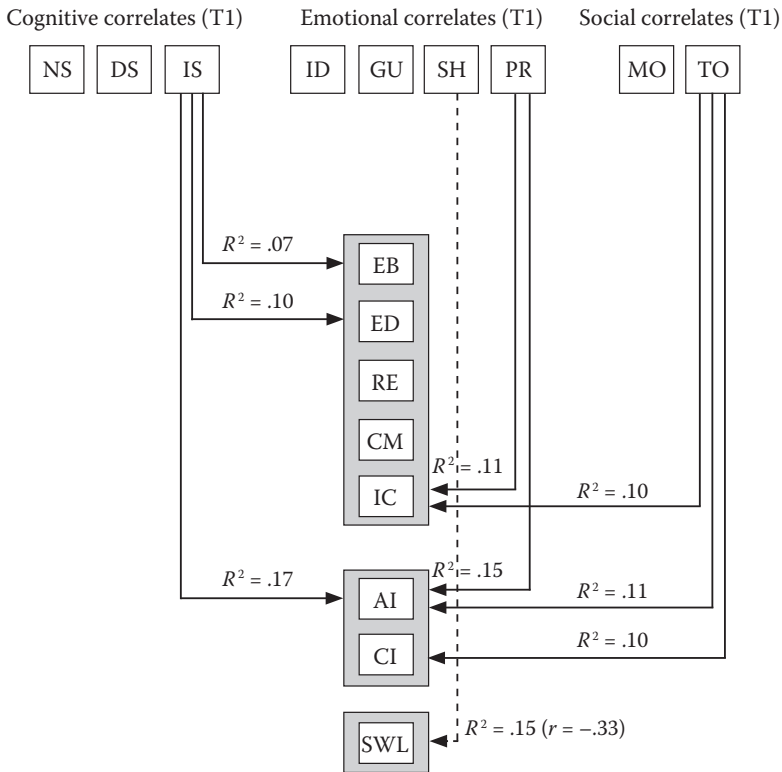


Figure 15. Predictors of dimensions of identity development, identity capital, and satisfaction with life (data from Tables 12 and 13; $n = 91$)

of exploration in breadth, exploration in depth, and adult identity at the end of the third grade. The sense of pride turned out to be a significant predictor for identification with commitment and for adult identity. A higher level of shame at the beginning of Grade 1 was associated with a lower level of general satisfaction with life towards the end of Grade 3, while the sense of guilt and difficulties in emotion regulation did not prove to be significant factors, and neither did moratorium life orientation. The initial level of transitive orientation – in Grade 1 – makes it possible to predict both indicators of identity capital towards the end of study, in the second semester of Grade 3.

These results indicate the important areas of work with students at the threshold of adulthood. The first area is the enhancement of their cognitive competencies (informational style), the second one is the enhancement of their satisfaction with themselves and their achievements (pride) as well as the reduction of the sense of shame, and the third one is the formation of a future-focused life orientation (transitive orientation).

5. Conclusion

The comparison of students' identity statuses at the beginning of the analysed two- or three-year period of education shows that we can hardly speak of significant or systematic changes either in younger students – in Grades 1 and 2 – or in older ones, in Grades 2 and 3. The tested groups of students were highly internally diverse, and their small size hardly allows for drawing far-reaching conclusions.

However, even such a limited analysis shows that the school environment did not provide most of them – least of all basic vocational school students – with conditions optimal for identity formation. Some of the students squandered the psychological capital that they had begun the first grade with, and in some others regressive changes occurred; in a majority of students there was a decrease in the level of pride and no increase in transitive life orientation; the informational style of processing identity problems – which is the most favourable one – did not become any stronger, either.

Students completing the third grade were very similar to one another – more so, in fact, than they had been at the beginning of the first grade, regardless of the type of school they attended. It can be said, bitterly, that the schools successfully accomplished the important task of smoothing away the differences *à rebours*. Not only did they fail to elevate their students with various personal and social resources, connected with families of origin and with the effects of previous stages of education in primary and lower secondary schools, to a similarly mature level of identity at the threshold of adulthood and to a similar level of identity capital, but they in fact made them similar to one another by limiting their resources through non-use and neglect as well as through failure to provide them with opportunities to gain new ones.

CONCLUSION



The research has yielded plenty of valuable information, making it possible to describe the psychological functioning of upper secondary school students nearing the end of adolescence and about to enter adulthood. The research design allowed for performing several types of simple and complex comparisons: cross-sectional (different groups tested at the same time), time-lag (different groups tested at different times), and longitudinal (the same groups tested at different times) (cf. Shaie & Strother, 1968). We analysed the results on several levels in order to compare the outcomes of these analyses and only on that basis to formulate the findings and recommendations for educational practice.

1. Main Research Findings

1.2. The findings of cross-sectional comparisons

First (see Chapter 5), we analysed – separately – the six sets of results obtained from students of all the schools selected for the research project (Table 1). There were six of these sets, since the research was conducted six times in each school during the three-year period (every semester). The participants, each time, were students of all grades of a given school, regardless of whether they had been tested before or whether they were tested for the first time, but only those who consented to participate in the study. In the case of underage students, parents' consent was also required.

In each of the six stages we used the DIDS/PL questionnaire, and based on the scores we established the levels of five dimensions of identity development as well as the type of identity status (the form of identity). The second instrument administered in each of the six stages was the PFQ-2/PL, measuring the level of self-conscious emotions: shame, guilt, and pride. Only in the

Table 1. The Number of Students Tested in Stages 1 to 6 (the Basis of Cross-Sectional Comparisons)

Time / stage of the study	Autumn 2012	Spring 2013	Autumn 2013	Spring 2014	Autumn 2014	Spring 2015
	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Grade 1	310	408	896	772	815	620
Grade 2	354	423	619	544	813	713
Grade 3	367	424	733	633	600	533
Grade 4	2	197	162	139	186	151
n_{tot}	1033	1452	2410	2088	2414	2017
% Women	50.9	53.0	54.2	54.5	55.2	56.9

Note. Grades 1-3 – in basic vocational schools, technical upper secondary schools, specialised and general upper secondary schools functioning in vocational school complexes, and general upper secondary schools; Grades 4 – only in technical upper secondary schools.

case of the scores on these two questionnaires was it possible to perform full cross-sectional comparisons and compare the results from all six stages. The remaining instruments were administered in some of the stages (Table 2), and so various configurations of groups were compared.

Table 2. Research Instruments Used in Stages 1–6

	Measure		Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Cognitive correlates	Dimensions of identity development and identity status	DIDS/PL	x	x	x	x	x	x
	Cognitive styles of processing identity problems	ISI-4/PL	x	x				x
	Need for cognitive closure and Decisiveness	NFC-S/PL						x
	Right-wing authoritarianism	RWA/PL						x
Emotional correlates	Shame, guilt, and pride	PFQ-2/PL	x	x	x	x	x	x
	Difficulties in emotion regulation	DERS/PL	x	x		x		
	Emotion regulation strategies	ERQ/PL			x	x	x	
	Shame rumination	SRS/PL			x	x	x	
	Experience of dissociation	A-DES/PL			x	x	x	
Social correlates	Identity capital	ISRI/PL					x	x
	Life orientation and type of social participation	SPQ1-S	x	x		x		x
	General satisfaction with life	SWLS/PL						x

Next, we compared the results of the analyses performed separately for the six sets of results. The aim of such cross-sectional comparisons was to determine to what extent the patterns of associations between the psychological variables measured and their profiles for particular subgroups of students with different identity statuses were similar as well as to what extent and in what areas they were different (see the analysis of results in Chapter 5). It turned out that the configurations of variables were very similar in groups tested in different stages.

In each stage of the research we observed a similarly high diversity of students in terms of the type of identity status. This diversity was associated to a significant though relatively small degree with factors such as:

- type of school (the values of Cramér's $V = .10 - .16, p < .001$); basic vocational school students exhibited identity diffusion the least often in each of the six stages, and they exhibited formed identity the most often – also in every stage; identity moratorium was much more frequent in students of general upper secondary schools than in their peers from specialised or general upper secondary schools in vocational school complexes and from technical upper secondary schools; the results therefore show that most students of basic vocational schools (in each stage of the study) had identity crisis resolution already behind them, while most students of specialised and general upper secondary schools – especially from those general (comprehensive) ones that were not part of vocational school complexes – were still struggling with it;
- students' gender (Cramér's $V = .13 - .17, p < .001$); women (in Stages 3, 4, 5, and 6) exhibited the *ruminative moratorium* status significantly more often than men, while the *foreclosure* status was much more often found in men; two statuses – *undifferentiated identity* and *achievement* – turned out to be unrelated to gender;
- students' age (grade) turned out to be a factor weakly associated with the type of identity status, and only in two out of six stages of the study: in Stages 4 and 6 (Cramér's $V = .06$ and $.08, p < .001$); it can therefore be concluded that, since the diversity of identity statuses was similar in each grade as well as similar in measurements performed at the beginning and at the end of the school year, then it is associated with age to a negligible degree, which means that the observed differences in the number of students with the same identity status were systematically related neither to the students' age nor to the moment in the course of education (measurement in the first vs. the second semester of a given school year); however, as expected, we observed that the youngest stu-

dents (aged 16-17), in Grade 1, usually exhibited the statuses of *diffused diffusion* and *undifferentiated identity*;

- mother's education was not associated with the student's identity status in any of the six stages of the study, while father's education turned out to be significant, though only marginally (Cramér's $V = .07$, $p < .01$) and only in the last stage.

Of the correlates of identity statuses, the following were of considerable significance:

- diffuse-avoidant style of processing identity problems; this style was more often found in students with not-yet-formed identity statuses (precrisis phase: *diffused diffusion* and *carefree diffusion*);
- transitive life orientation; this orientation was stronger in students with formed identity statuses (postcrisis phase: *foreclosure* and *achievement* statuses);
- community identity as an indicator of identity capital; this feeling was considerably stronger in students with formed identity statuses (post-crisis phase: *foreclosure* and *achievement*).

Also the following factors turned out to differentiate students with different identity statuses significantly, though weakly and not in every stage:

- informational style of processing identity problems and decisiveness (the scale measuring latter had very low reliability, $\alpha = .61$);
- shame, pride, shame rumination, low emotional awareness, and lack of emotional clarity;
- moratorium life orientation, adult identity (the sense of being an adult) as an indicator of identity capital, and the level of general satisfaction with life.

Table 3. Characteristics of Students in Different Phases of Struggling With Identity Crisis

Phase 1: precrisis unformed identity		Phase 2: crisis identity moratorium		Phase 3: postcrisis formed identity
frequently used diffuse-avoidant style	>		>	rarely used diffuse-avoidant style
weak sense of integration with the community of adults	<		<	strong sense of integration with the community of adults
		low sense of pride	<	high sense of pride
		weak transitive orientation	<	strong transitive orientation
		low satisfaction with life	<	high satisfaction with life

The main difference between students with different forms of identity are presented in Table 3. The analysis of the significance of differences between groups of students differing in terms of identity status, performed in each stage of the study, revealed that students with formed identity (both statuses: *foreclosure* and *achievement*) – those who were in the postcrisis phase at the time of the measurement, having coped with identity crisis at least for some time – used the diffuse-avoidant style of processing identity problems the least often (less often than those in the precrisis phase or even in the crisis phase), had a relatively high sense of pride, were characterised by strong transitive orientation and a strong sense of being integrated with the community of adults (community identity), and exhibited high general satisfaction with life.

1.2. The findings of time-lag comparisons

The second stage of the analysis of results (see Chapter 6) covered only first-grade students who began attending the chosen upper secondary school in three consecutive years. The question we sought to answer was: to what extent the three groups of students in the same age bracket of 16-17 can be treated as one age group and to what extent they should be treated as three distinct cohorts? In the former case, the comparisons of the three sets of scores should yield the same or very similar results; in the latter case, the results should differ significantly. The participants were students of schools with vocational curricula (in Groups A, B, and C) and with general (comprehensive) curricula (in Groups B and C). Table 4 presents information about the number of students tested in three consecutive school years. We performed a time-lag analysis only for the results of those students from each group (A, B, and C) who had been tested twice: at the beginning and towards the end of the first grade.

Table 4. The Number of First-Grade Students Tested in Three Consecutive School Years (the Basis for Time-Lag Comparisons)

Group A. school year 2012/2013				Group B. school year 2013/2014				Group C. school year 2014/2015			
Autumn 2012		Spring 2013		Autumn 2013		Spring 2014		Autumn 2014		Spring 2015	
Stage 1		Stage 2		Stage 1		Stage 2		Stage 1		Stage 2	
<i>n</i>	% W	<i>n</i>	% W	<i>n</i>	% W	<i>n</i>	% W	<i>n</i>	% W	<i>n</i>	% W
310	60.8	408	59.8	896	55.2	772	56.4	815	56.9	620	58.8
Students tested twice – their scores were subjected to time-lag analyses											
234				624				535			

Full time-lag comparisons could only be performed for two instruments, namely: DIDS/PL (dimensions of identity development and identity status) and PFQ-2/PL (shame, guilt, and pride), just like in the case of cross-sectional comparisons.

A comparison of the groups (A, B, and C) in terms of the number of identity statuses and the percentages of students with these identity statuses in the first stage of the study (the beginning of the first grade) showed that the three compared groups differed considerably. First, five different identity statuses were identified in Groups A and C and six were identified in Group B. Second, only the percentages of students with the *undifferentiated identity* status were similar in all three groups (A: 24%, B: 24%, C: 26%). Third, in each of the groups there was a different proportion of students in the precrisis phase, with identity diffusion statuses, and in the crisis phase, with identity moratorium statuses, to the number of students with formed identity statuses (postcrisis phase). Thus, the analysis of the frequency of different identity statuses revealed a high diversity of students within the compared groups and at the same time large differences between the groups, which makes it legitimate to conclude that we are dealing with three distinct cohorts rather than one age group.

The analysis of the results obtained for each group in the second stage (towards the end of the first grade) shows that the three compared groups were more similar to one another than in the first stage (the beginning of the first grade), but the differences between them were still fairly large. Only the percentages of students with the statuses of *undifferentiated identity* (24%, 26%, and 26%, respectively) and *ruminative moratorium* (15%, 15%, and 16%) were very similar in all three groups.

The differentiating influence of school type, gender, age, and parents' education was very strong and similar to that found in cross-sectional comparisons, though different across the three analysed groups. School type was the most significant factor – in both stages of research in Group A and only in the first stage (at the beginning of study in the chosen school) in Groups B and C. In Groups A and B in basic vocational schools, a significantly higher percentage of students had the *undifferentiated identity* status than in technical, specialised, and general upper secondary schools. The number of students with formed identity statuses in general upper secondary schools at the start of school (Semester 1 in school years 2013/2014 and 2014/2015) was also considerably smaller than in schools functioning in vocational school complexes, representing the remaining three types (all three having vocational curricula). It thus turned out that the three consecutive years of first-grade students at a similar age were three groups completely different from one another in terms of psy-

chological characteristics – and that this was the case in each type of upper secondary school.

The analyses of associations between the psychological factors measured in a given group and the types of identity status, performed separately for each group of first-grade students, yielded results similar to those obtained in cross-sectional comparisons. The only factors that turned out to be significantly associated with identity status type were: diffuse-avoidant style of processing identity problems ($\eta^2 = .25 - .27$; in cross-sectional comparisons: $.23 - .24$), transitive life orientation ($\eta^2 = .22 - .30$; in cross-sectional comparisons: $.19 - .32$), and community identity as an indicator of identity capital ($\eta^2 = .18 - .20$; in cross-sectional comparisons: $.22 - .23$).

1.3. The findings of longitudinal comparisons

In the third step (see the analysis of results in Chapter 7), we tested two years of first-grade students for two years (four measurements; Grade 1 → Grade 2), two years of second-grade students for two years (four measurements; Grade 2 → Grade 3), and one year of first-grade students for three years (six measurements; Grade 1 → Grade 3). The compared groups of students were not large in comparison to the groups in cross-sectional and time-lag analyses (Table 5).

Table 5. The Number of Students in Longitudinal Comparisons

School year	Grade	Comparison group	T1: first measurement		T2: last measurement	
			<i>n</i>	%	<i>n</i>	% of T1
2012/2013 – 2013/2014	1 - 2	1	310	100	145	47%
	2 - 3	2	354	100	112	32%
2012/2013 – 2014/2015	1 - 3	3	310	100	93	30%
2013/2014 – 2014/2015	1 - 2	4	896	100	366	41%
	2 - 3	5	619	100	249	40%

The analysis of results in each of the five groups listed in Table 5 concerned mainly the changes of identity statuses that occurred between the first measurement (T1) and the last one (T2 – after two or three years). Above all, we observed that all the groups of students were highly internally diverse in the two compared measurements and that this diversity did not decrease significantly with time. We observed no significant and systematic progressive changes involving transition from unformed identity statuses to moratorium or formed statuses or from moratorium statuses to formed statuses in either

cycle – two-year or three-year. Most of the changes of identity status were regressive (consisting in a fall to “lower” statuses), and we found no change at all in between 30% and as many as 70% of students. The 70% refers to Group 1, consisting only of students from vocational school complexes – as many as 70% of them retained their initial status and still exhibited a status of identity diffusion!

The analysis of the intensity of dimensions of identity development and the profile of the measured cognitive, emotional, and social variables makes it possible to identify basic vocational school students as a serious risk group for failure to cope with the tasks of adulthood in the modern world. This conclusion is based on the lack of clear progressive changes regarding adaptive exploratory activities and significant regressive changes in the form of an increase in the level of maladaptive ruminative exploration as well as a decrease in the level of behaviours connected with commitment making and identification with commitment. Moreover, we observed regressive changes towards the status of diffusion in many students, which means these students found themselves in the precrisis phase again. Their sense of pride decreased significantly, transitive life orientation did not increase, and informational style of processing identity problems did not become stronger.

The five longitudinal comparisons yielded the following findings:

- students of different types of schools were very similar to one another when starting the first grade in the chosen upper secondary school, and the similarity continued for the first three semesters (during that time, the “type of upper secondary school” factor did not differentiate the results);
- differences appeared in the second semester of Grade 2 – students of general upper secondary schools more often engaged in exploratory activities, both orientational (exploration in breadth) and analytic (exploration in depth);
- the largest differences between students of different types of schools occurred in the first semester of Grade 3: students of general upper secondary schools exhibited higher levels of exploration in breadth and in depth as well as identification with commitment and a lower level of ruminative exploration than students attending basic vocational schools and technical upper secondary schools (i.e., than students of schools with vocational curricula);
- towards the end of Grade 3 (this was Group 3, tested on a three-year basis), no differences between students attending different types of schools were statistically significant, namely: the intensity of the five dimensions of identity development was similar in students of all types

of schools, and the levels of pride and shame decreased to a similar level regardless of school type; there were no significant differences, either, in any of the styles of processing identity problems, in either of the two life orientations, and in either of the two types of social participation.

Longitudinal comparisons of the results of the first measurement at the beginning of Grade 1 and the last measurement towards the end of Grade 3 (Table 5: Group 3, $n = 93$), whose aim was to identify the types of changes, revealed that students finishing the third grade were more similar to one another than they had been at the beginning of the first grade due to numerous regressive changes. We observed this effect in all type of schools – in basic vocational schools, technical upper secondary schools, and general or specialised upper secondary schools in vocational school complexes.

It can be said, bitterly, that the schools successfully accomplished the important task of smoothing away the differences *à rebours*. Not only did they fail to elevate students with various personal and social resources, connected with families of origin and with the effects of previous stages of education in primary and middle (lower secondary) schools, to a similar level of identity formation at the threshold of adulthood and to a similar level of identity capital, but they even made them similar to one another by limiting their resources through non-use and neglect as well as by failing to provide them with opportunities to gain new ones.

2. Implications for Educational Practice

2.1. The functions of education

The obtained results are disturbing. This is because they show that the tested upper secondary schools did not cope with maintaining balance between two key functions of education: socialisation and emancipation (Rorty, 1993). This concerned basic vocational schools to the greatest degree, and it is their graduates who start independent personal and professional life earlier than others. Some of them do not continue systematic education after finishing the vocational school and lose the opportunity to gain systematic support from teachers in building their identity and in struggling with further developmental and life tasks.

The purpose of education, which ensures balance between the two functions, is to create conditions for and provide help in the realisation of developmental tasks in accordance with personal aspirations, abilities, talents, and limitations (the emancipatory function) as well as tasks connected with taking

on social roles or family, professional, and civic tasks in accordance with the social norms (the socialising function). The help of parents, teachers, and other adults as well as peers (performing the role of tutors) – as people more competent or more experienced in life in various domains – means, on the one hand, enabling and supporting activities that consist in identifying, using, and modifying the already possessed personal and community resources; on the other hand, it means encouraging and enabling the acquisition of new resources. In the case of personal resources, this means discovering new fields of activity, developing passions and interests, as well as seeking new goals and new ways of achieving them, and in the case of community resources – actively modifying the conditions of one’s life in both the physical environment (e.g., environment preservation) and the social environment (e.g., voting on the civic budget or volunteer work), in accordance with one’s changing needs.

Stress on the socialising function is the same aim at a particular stage of education with regard to all students, which consists in providing them – in accordance with the core curriculum – with a “package” of knowledge and skills useful mainly in the next stage of education and in the future on the job market. That “package” is supposed to be consistent with the social expectations and requirements, including those of potential teachers at the next stage of education and those of employers; it is also supposed to be consistent with the social norms, morals, and even local customs.

Stress on the socialising function is therefore strictly linked with the transmission model of education, which consists in passing on ready, teacher-selected, and teacher-organised knowledge and skills. It inevitably leads to a decrease in the diversity of student groups, which is the outcome of introducing similar requirements, specifying the ways of using educational materials and the types of these materials (textbooks, reading list, exercise books, note cards), as well as using the same methods of monitoring and assessing the level of knowledge and skills. In the area of educational interventions, the transmission model prefers and enhances the assimilative type of social participation, since it involves emphasis on “adopting” the system of values and forms of identity from significant others.

The opposite of the transmission model is the model of cooperation based on exchange and on the alternation of the teacher’s and the student’s contribution. There is room here for diverse activity, including exploration – both the teacher’s and the student’s. School is no longer a factory expected to account for the quality of its products and becomes a community of people at various ages, with different kinds of life experience, and different abilities. It has rich and diverse resources that everyone can use. It is a learning and developing organisation. It creates conditions conducive to the satisfaction of individual

needs, which in turn contributes to an increase in interindividual diversity, both among school personnel and among students.

The question of skills useful in the job market and activities consistent with the profile of a graduate required by employers is replaced by the question of skills useful in life in the increasingly diverse world. Instead of looking for effective methods of knowledge transmission and skills training as well as effective control and disciplining of students' behaviour, teachers' efforts focus on creating conditions and a climate conducive to learning together and to developing the students' willingness and ability to practise self-regulation and to take responsibility for their own learning process. In the area of educational interventions, this means looking for balance between personal and social goals, creating opportunities for cooperation for the benefit of individuals and at the same time for the common good, developing critical thinking during work on research and social projects, preferring the integrative path of social participation, and promoting the independent construal of "personal" identity – that is, identity achievement.

2.2. The educational relationship promoting identity achievement

The role of education in the formation of identity marked by a high degree of integrity and at the same time by flexible borders and openness, enabling adaptation in a changing environment, is discussed in the analyses by Avi Kaplan and Hanoch Flum (2012; cf. Hanoch & Kaplan, 2012¹). They draw attention not only to the quality of organisation and to the diversity of school and out-of-school learning environment but also to the promotion of learning strategies at school and by individual teachers and to their key role in this process as organisers of the social learning environment and as tutors. They believe that students' identity, being an effect of their past development in a particular family, school, and local environment, largely determines their motivation to learn and their way of learning in each subsequent stage of education, thus also determining the end results.

The issue of what identity (i.e., what identity status) students have when starting a given school and what happens later – what changes this "initial" identity undergoes during the several years of education in that school – is as much an individual developmental problem of each student as it is a teaching problem (curiosity and interest in the surroundings, willingness to change, motivation to learn, persistence in coping with failures at school) and an edu-

¹ Cf. special issue, titled *Identity Formation in Educational Settings* [*Contemporary Educational Psychology*, 2012, 3(37)].

cational problem (the system of values and the acceptance of social norms, striving for autonomy, a sense of agency) faced by both parents and teachers.

Analysing the role of family and school (institutional) environment in the process of identity formation, James E. Marcia (2009) draws attention mainly to the quality of students' personal relations with their parents, teachers, and other adults, including significant others. The more these relations are based on trust (cf. Brzezińska & Czub, 2013), the more personalised they are; the better the adults understand the importance of self-regulation and the more they strive to develop it in their students, the more they promote the "exploratory attitude." This attitude is an important source of personal experience, based on which it is possible for an identity to become closer and closer to the most mature and flexible form – increasingly close to "open" identity achievement. Marcia (2009, p. 674) even recommends introducing *Self-Regulated Personalised Learning* (SRPL) in schools, especially in those attended by young people. From this point of view, simply and plainly, he formulates the key rule regulating the relations between students and teachers and defining what a good teacher is: "The 'sage on the stage' is replaced by the 'guide at the side'" (Marcia, 2009, p. 674). He does stress, however, that the idea of linking the teachers' open-minded attitude with the students' identity achievement is based on the [rather risky – AB] assumption that the mental habits shaped in the course of learning school subjects are generalised to thinking about oneself and one's life.

If they wish to promote the development of curiosity and cognitive openness and, consequently, to promote exploratory activities and thus to encourage independent choices and enhance this attitude (Table 6), parents and teachers must therefore, above all, perform a facilitating rather than initiating and directing function or merely sustaining the learning process in their children or students. They must be advisors and tutors rather than teachers transmitting knowledge, trainers of particular skills, or controllers. The tutor–student relationship is more symmetrical and presupposes emotional (in the form of trust, empathy, and commitment) as well as cognitive and social (in the form of sharing one's resources – knowledge and skills – and cooperation in solving various kinds of tasks) contribution of both parties to mutual interactions. This requires great commitment, but brings benefits – educational and developmental – to both sides.

3. Recommendations

Our results point to the need for form tutors and for teachers to undertake intensive action – with the help of school counsellors and psychologists as well

as various specialists from psychological and pedagogical counselling centres and institutions from outside the system of education. These actions should cover several areas important to the quality of young people's functioning at the threshold of adulthood, regardless of the predicted path of their further personal and social development, including professional development: (a) further study, (b) looking for and taking up a job, (c) combining work and study, (d) giving up study and not looking for a job, or (e) ceasing to look for a job after failures to find one appropriate for oneself or failures to find any job at all.

The areas that – in the light of our research results – require the greatest commitment on the part of form teachers in creating the social environment for development and study, greater consistency of the activities of form tutors and teachers, and cooperation in teams of teachers working with the same classes are as follows:

1. The enrichment and diversification of offers of activity, which includes opportunities to undertake various social roles both in class and in school as well as out of school: in the case of younger students – encouraging experimentation and enhancing exploratory activities; in the case of older students – enabling and encouraging independent choices, planning, and long-term commitment to the chosen fields.
2. Encouraging and maintaining engagement in activities for the benefit of other people and for the common good (see the conception of distant tasks, proposed by Kazimierz Obuchowski, 1985; cf. Brzezińska, 2000, Figure 1.1. on p. 35): in the case of younger students – mainly short-term activities (work on projects as part of a given school subject, campaign activities, short interventions), with goals that can be achieved quickly and yield quick gratification; in the case of older students – activities that require planning and are implemented in a long-term perspective.
3. Enhancing and developing cognitive abilities by using various information technologies in the process of learning at school as frequently as possible (cf. Marcia, 2009): the abilities to be enhanced are particularly those connected with looking for information in different sources and critical analytic thinking (the formation of an informational, rather than normative, style of processing information);
4. Developing stable self-esteem and a sense of competence: enhancing satisfaction with oneself and one's achievements (sense of pride) as well as enabling the presentation of these achievements in various forms (exhibitions, interviews, competitions, the school's website) at school and, above all, outside it, in the local community;
5. Help in regulating self-conscious emotions, highly important for social and moral functioning: this includes, on the one hand, regulating the

Table 6. The Conditions of the Formation of Different Identity Statuses: The Characteristics of the Environment and the Role of Adults

Identity diffusion	
Characteristics of the educational environment	Developmental effect
<ul style="list-style-type: none"> - poor and nondiverse physical surroundings (home, neighbourhood, school, local, and regional environment) - excessively homogeneous social environment, e.g., enclaves of poverty and enclosed housing estates (little diversity in terms of age, gender, kinship, social roles, and economic status) - few opportunities to engage in social interactions (strongly marked borders: e.g., related to age, gender, economic status, and worldview), connected with the existence of inaccessible "closed zones," areas of exclusion, or even ghettos - small number of institutions in which one can engage in various interactions - large physical distance from the centres of culture (periphery of a city or region) - transportation difficulties in reaching culture, health care, and education institutions ("far from the road" syndrome) 	<ul style="list-style-type: none"> - weak orientation in the environment (its offers and opportunities, demands, expectations, potential sources of support, and dangers) caused by the lack of personal exploratory activity - a feeling of being lost and a sense of confusion, particularly in situations that require making decisions, due to the lack of experience caused by a shortage or homogeneity of offers/opportunities - high susceptibility to the influence of other people and groups - no plan of one's own action - provisional, unstable, and chaotic actions
Conditions of identity development	Adult's role
<ul style="list-style-type: none"> - lack of opportunities to explore the physical and social environment (including ideologies, worldviews, beliefs, and opinions) - lack of opportunities to analyse (exchange, discuss, confront) various alternatives of acting / thinking - objective lack of options to choose from regarding the fields of activity for oneself - lack of opportunities and encouragements to make choices concerning oneself and the environment - lack of opportunities to make decisions and commitments and to face their consequences - lack of expectations on the part of the environment (or unspecified or unstable expectations) regarding choices and decisions 	<ul style="list-style-type: none"> - lack of significant adults - lack of clearly defined requirements on the part of adults (parents, teachers) - unspecified distance between adults and the teenager - frequently, weak emotional contact with adults, emotional rejection, or neglect - lack of systematic control from adults (parents, teachers) - incidental control usually concerns behaviours considerably diverging from what is regarded as normal in a given community - lack of interest in the teenager's problems - neglecting, ignoring, or failure to acknowledge his or her basic needs, particularly emotional ones

Identity moratorium

Characteristics of the educational environment	Conditions of identity development	Adult's role	Developmental effect
<ul style="list-style-type: none"> - diverse physical surroundings (home, neighbourhood, school, and local environment) - diverse social environment (in terms of age, gender, kinship, education, social roles, and economic status) - numerous opportunities to engage in various kinds of social interactions 	<ul style="list-style-type: none"> - frequently too numerous (excess) and too diverse opportunities to explore the physical and social environment - numerous and diverse opportunities to analyse (exchange, discuss, juxtapose) various alternative lines of action / thought - lack of opportunities and encouragements to make choices concerning oneself and the environment - lack of opportunities to make decisions and commitments and to face their consequences - lack of stable and clear expectations on the part of the environment regarding the necessity of making choices and decisions 	<ul style="list-style-type: none"> - lack of significant adults, or adults as significant others mainly in the emotional dimension - lack of clearly defined requirements on the part of adults (parents, teachers) or unstable requirements and expectations on the part of adults - unspecified, unstable, and usually too short distance between adults and the teenager - unspecified and unstable temporary control by adults (parents, teachers), determined by emotions or circumstances - inconsistent interest in the teenager's problems (from lack to excess of interest and interference in some areas) 	<ul style="list-style-type: none"> - poor knowledge of the environment (its offers and opportunities, requirements, expectations, potential sources of support, and dangers) as a result of an excess of offers or their high diversity - a sense of being lost and confused, particularly in situations that require making decisions, stemming from an excess of offers/opportunities and weak organisation of one's exploratory experiences - high susceptibility to the influence of other people and groups - unstable line of personal choices and actions - no plan of one's own action - unstable and chaotic actions - frequent procrastination and abandonment of actions before completing them (lack of persistence, lack of faith in success when obstacles arise, a fear of evaluation)

Identity foreclosure

Characteristics of the educational environment	Conditions of identity development	Adult's role	Developmental effect
<ul style="list-style-type: none"> - strongly adult-controlled diversity of the physical environment (home, neighbourhood, school, and local environment) – for the sake of security - controlled access to the offers/opportunities of the physical environment - limiting the number and type of offers/opportunities - choosing offers/opportunities for the teenager - adult-controlled diversity of the social environment (in terms of age, gender, sexual orientation, education, social roles, and economic status) - limited, specified, and adult-controlled opportunities to engage in social interactions 	<ul style="list-style-type: none"> - lack of opportunities for extensive exploration of the physical and social environment (including ideologies, worldviews, beliefs, and opinions) or strictly adult-defined conditions, limits, and fields (areas) of exploration - lack of opportunities to freely analyse (exchange, discuss, juxtapose) various alternative lines of action / thought - adult-defined situations of making choices regarding oneself and the environment - adult-defined situations of making decisions and commitments and facing their consequences - adult-defined expectations regarding the areas and directions of the choices and decisions made 	<ul style="list-style-type: none"> - adults as significant others, sometimes authorities in various fields or even role models - clearly defined and stable (often rigid, unchanging) requirements and expectations on the part of adults (parents, teachers) - specified, stable, and usually too large distance between adults and the teenager - strong and stable control by adults (parents, teachers) - marked interest in the teenager's problems - frequent interference in the teenager's fields of decision making - lack of acceptance for the teenager's own free explorations - limiting or eliminating opportunities for risky behaviour - frequent use of humiliation as a technique of socialisation or disciplining 	<ul style="list-style-type: none"> - good (selective) orientation in the environment – its offers and opportunities, requirements, expectations, potential sources of support, and dangers – as a result of their being clearly defined by adults - a sense of security and stability in situations that require making decisions, as a result of adults' acceptance of these decisions - low susceptibility to the influence of other people or groups, caused by a sense of confidence in one's choices - clear plan of one's own action, agreed on with significant adults - consistent realisation of one's plans - a sense of confusion in nonstandard situations (ambiguous, suddenly changing, involving conflict, emotionally difficult, requiring independent decision making)

Identity achievement			
Characteristics of the educational environment	Conditions of identity development	Adult's role	Developmental effect
<ul style="list-style-type: none"> - diversity of the physical surroundings (home, neighbourhood, school, and local environment) discreetly controlled by adults for the sake of security - broad and free access to the diverse opportunities offered by the physical environment - broad and free access to the diverse opportunities offered by the social environment (in terms of age, gender, sexual orientation, education, social roles, and economic status) - numerous and diverse opportunities to engage in social interactions and to use them freely 	<ul style="list-style-type: none"> - numerous and diverse opportunities to extensively and freely explore the physical and social environment - numerous and diverse opportunities to freely analyse (exchange, discuss, juxtapose) various alternative lines of action / thought - encouragement from adults to make choices regarding oneself and the environment - encouragement from adults to make decisions and commitments and to face their consequences 	<ul style="list-style-type: none"> - adults as significant others, emotionally important, giving a sense of security, authorities in various fields as well as moral authorities - clearly specified, comprehensible, and stable but at the same time flexible requirements and expectations on the part of adults (parents, teachers) - specified, stable, but flexible distance between adults and the teenager - stable, flexible, and discreet control by adults (parents, teachers) - marked interest in the teenager's problems combined with respect with his/her autonomy / privacy - approval, encouragement, and support for the teenager in his/her explorations 	<ul style="list-style-type: none"> - good orientation in the environment (its offers and opportunities, demands, expectations, potential sources of support, and dangers) as a result of one's own rich exploratory experience - a sense of security and stability in situations that require making decisions as a result of one's own exploratory experience and the certainty of the availability of support from the environment if necessary - low susceptibility to the influence of other people or of the group, stemming from a sense of certainty regarding one's choices, but at the same time readiness to change one's decisions when the circumstances change - a clear but flexible and changeable plan of one's own action, stemming from certainty regarding one's choice and no fear of failures

sense of shame and abandoning disciplinary activities based on public embarrassment, often experienced by young people as humiliation, and on the other hand – helping to understand the sense of guilt, its sources as well as positive and negative consequences for individual and social functioning;

6. Developing the ability to plan one's activities with different time perspectives in view: by encouraging pair work and team work on the creation and realisation of scientific, professional, and social projects; developing the ability of cooperating in various forms and in teams of various sizes, with people at different ages, on tasks of different kinds, and in different circumstances, which promotes the building of trust in interpersonal relations and weakens negative stereotypes.

Table 6 describes the educational environment and adults' favourable or unfavourable behaviours contributing to the development of various forms of identity – from the least (identity diffusion) to the most mature (identity achievement).

3. Concluding Remarks

As Zygmunt Bauman (2012) observed, what has been of great importance to contemporary reflection on the role of education is Gregory Bateson's distinction of three levels of education. The first one is the transmission level, when knowledge in a "ready" form is passed on to the student by a teacher, more competent in a given area, or derived from written sources and assimilated by the student, often uncritically. The second level is the construction, with the teacher's help, of "cognitive frames," whose function is to organise the information obtained in various ways, no longer only in the form of a ready message closed to the teacher's individual modifications. Finally, there is the third level,

imparting the ability to dis-assemble and rearrange the prevailing cognitive frame or to dispose of it completely [when it ceases to be functional – AIB] without a replacing element (Bauman, 2012, p. 13).

According to Bauman, this third level is becoming [only in good schools – AIB] a standard in the process of teaching and learning today, and a similar turn has also occurred in the conceptions of identity (*sic!*), which is why

quality schooling needs to provoke and propagate openness, not closure of mind (Bauman, 2012, p. 23).

This means the school's task cannot be education understood as knowledge transmission and equipping students in a package of skills useful from

employers' point of view, in the labour market; the school's task should be to support their cognitive, emotional, social, and moral development as well as the development of their identity. What their identity is like – more or less mature, adopted in a ready form from others and handed down by them or achieved through personal effort and commitment to seeking out opportunities and making choices – determines the students' motivation to learn and willingness to change, including their readiness to adapt in a diverse, changeable, and unpredictable environment. This is consistent with the conclusion of Noam Chomsky's (2012) lecture:

If there isn't a lively cultural and educational system which is geared toward encouraging creative exploration, independence of thought, willingness to cross frontiers, to challenge accepted beliefs, and so on – if you don't have that, you're not going to get the technology that can lead to economic gains. ... That's what teaching ought to be: inspiring students to discover on their own; to challenge if they don't agree; to look for alternatives if they think there are better ones; to work through great achievements of the past, and try to master them on their own. ... Education is really aimed at just helping students get to the point where they can learn on their own.²

² As cited (transcribed) in: <http://www.thedailyriff.com/articles/noam-chomsky-the-purpose-of-education-869.php>; the video of the lecture was accessed at <https://youtu.be/DdNAUJWJN08>.

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APPENDICES



Appendix 1

THE OFFER OF POLISH UPPER SECONDARY SCHOOLS

The research whose results this book presents was conducted in the period when changes were being introduced in the Polish system of education and in the structure of upper secondary education, pursuant to the Act of 19 August 2011 amending the Act on the system of education and certain related acts (Dz.U. [*Polish Journal of Laws*] no. 205, item 1206).

Table 1. The Offer of Polish Upper Secondary Schools (till 2015/2016)

Type of school	Legal situation	Description
Three-year general upper secondary schools (<i>liceum ogólnokszt.</i>)	before the 2011 reform	– graduates obtained a certificate of secondary education after passing the school-leaving examination (<i>matura</i>), roughly equivalent to A levels
	after reform	– as above
Three-year specialised upper secondary schools (<i>liceum profilowane</i>)	before the 2011 reform	– general vocational curriculum – graduates obtained a certificate of secondary education after passing the school-leaving examination (<i>matura</i>), roughly equivalent to A levels
	after reform	– liquidated
Four-year technical upper secondary schools (<i>technikum</i>)	before the 2011 reform	– graduates obtain a certificate confirming vocational qualifications after passing examinations confirming qualifications for a particular vocation; they also obtained a certificate of secondary education after passing the school-leaving examination (<i>matura</i>), roughly equivalent to A levels
	after reform	– as above
Basic vocational schools (<i>zasadnicza szkoła zawodowa</i>)	before the 2011 reform	– not shorter than 2 years and not longer than 3 years – graduates obtained a certificate confirming vocational qualifications after passing an examination

		and could pursue further education in a two-year complementary general upper secondary school or in a three-year complementary technical upper secondary school
	after reform	<ul style="list-style-type: none"> – three-year schools – graduates obtain a certificate confirming vocational qualifications after passing examinations confirming qualifications for a particular vocation; they can pursue further education in a general upper secondary school for adults as well as obtain additional vocational qualifications in vocational qualification courses
Two-year complementary general upper secondary schools (<i>liceum uzupełniające</i>)	before the 2011 reform	– intended for basic vocational school graduates graduates obtained a certificate of secondary education after passing the school-leaving examination (<i>matura</i>), roughly equivalent to A levels
	after reform	– liquidated
Three-year complementary technical upper secondary schools (<i>technikum uzupełniające</i>)	before the 2011 reform	<ul style="list-style-type: none"> – intended for basic vocational school graduates – graduates obtained a certificate confirming vocational qualifications after passing an examination; they also obtained a certificate of secondary education after passing the school-leaving examination (<i>matura</i>), roughly equivalent to A levels
	after reform	– liquidated

Compilation based on: Dz.U. [*Polish Journal of Laws*] no. 56, item 458.

Appendix 2.

CORRELATION MATRICES FOR THE FIRST COHORT OF FIRST-GRADE STUDENTS – SCHOOL YEAR 2012/2013

(TWO MEASUREMENTS): DIMENSIONS
OF IDENTITY DEVELOPMENT VS. SHAME, GUILT, AND PRIDE

Key:

Identity statuses:

1. Identity diffusion: diffused diffusion, carefree diffusion
2. Identity moratorium: undifferentiated identity, ruminative moratorium
3. Formed identity: foreclosure, achievement

Dimensions of identity development:

1. EB – exploration in breadth
2. ED – exploration in depth
3. RE – ruminative exploration
4. CM – commitment making
5. IC – identification with commitment

Self-conscious emotions:

1. SH – shame
2. GU – guilt
3. PR – pride

Statistics: r – Pearson correlation coefficient; p – the level of significance;
 n – the number of students with a given identity status

Cohort 1: 2012/2013 – the first measurement (T1)											Cohort 1: 2012/2013 – the second measurement (T2)										
Status	Dimension	EB	ED	RE	CM	IC	SH	GU	PR	Status	Dimension	EB	ED	RE	CM	IC	SH	GU	PR		
	EB	<i>r</i>	1	.521**	.638**	-.329	.221	-.019	.058	.171	<i>r</i>	1	.368*	.555**	-.430**	-.020	.344*	.335*	-.132		
		<i>p</i>	.003	.000	.071	.231	.917	.757	.357			<i>p</i>	.020	.000	.006	.901	.030	.035	.418		
		<i>n</i>	31	31	31	31	31	31	31	31	<i>n</i>	40	40	40	40	40	40	40	40		
	ED	<i>r</i>	.521**	1	.428*	-.071	.273	.154	.171	.096	<i>r</i>	.368*	1	.454**	-.320*	-.156	.008	.069	.018		
		<i>p</i>	.003	.016	.704	.137	.408	.359	.606			<i>p</i>	.020	.003	.044	.335	.962	.671	.910		
		<i>n</i>	31	31	31	31	31	31	31	31	<i>n</i>	40	40	40	40	40	40	40	40		
	RE	<i>r</i>	.638**	.428*	1	-.760**	-.185	-.026	.019	-.003	<i>r</i>	.555**	.454**	1	-.617**	-.158	.131	.134	-.005		
		<i>p</i>	.000	.016	.000	.320	.889	.918	.989			<i>p</i>	.000	.003	.000	.331	.420	.409	.975		
		<i>n</i>	31	31	31	31	31	31	31	31	<i>n</i>	40	40	40	40	40	40	40	40		
	CM	<i>r</i>	-.329	-.071	-.760**	1	.490**	.087	.057	.135	<i>r</i>	-.430**	-.320*	-.617**	1	.423**	-.138	-.232	.066		
		<i>p</i>	.071	.704	.000	.005	.643	.761	.470			<i>p</i>	.006	.044	.000	.007	.396	.150	.684		
		<i>n</i>	31	31	31	31	31	31	31	31	<i>n</i>	40	40	40	40	40	40	40	40		
	IC	<i>r</i>	.221	.273	-.185	.490**	1	.161	.217	.196	<i>r</i>	-.020	-.156	-.158	.423**	1	.015	-.099	.224		
		<i>p</i>	.231	.137	.320	.005	.387	.241	.291			<i>p</i>	.901	.335	.331	.007	.926	.543	.165		
		<i>n</i>	31	31	31	31	31	31	31	31	<i>n</i>	40	40	40	40	40	40	40	40		
	SH	<i>r</i>	-.019	.154	-.026	.087	.161	1	.413*	-.211	<i>r</i>	.344*	.008	.131	-.138	.015	1	.791**	-.156		
		<i>p</i>	.917	.408	.889	.643	.387	.021	.254			<i>p</i>	.030	.962	.420	.396	.926	.000	.336		
		<i>n</i>	31	31	31	31	31	31	31	31	<i>n</i>	40	40	40	40	40	40	40	40		
	GU	<i>r</i>	.058	.171	.019	.057	.217	.413*	1	-.100	<i>r</i>	.335*	.069	.134	-.232	-.099	.791**	1	-.105		
		<i>p</i>	.757	.359	.918	.761	.241	.021	.594			<i>p</i>	.035	.671	.409	.150	.543	.000	.520		
		<i>n</i>	31	31	31	31	31	31	31	31	<i>n</i>	40	40	40	40	40	40	40	40		
	PR	<i>r</i>	.171	.096	-.003	.135	.196	-.211	-.100	1	<i>r</i>	-.132	.018	-.005	.066	.224	-.156	-.105	1		
		<i>p</i>	.357	.606	.989	.470	.291	.254	.594			<i>p</i>	.418	.910	.975	.684	.165	.336	.520		
		<i>n</i>	31	31	31	31	31	31	31	31	<i>n</i>	40	40	40	40	40	40	40	40		

Diffused diffusion

Diffused diffusion

Appendix 3.

CORRELATION MATRICES FOR THE SECOND
COHORT OF FIRST-GRADE STUDENTS –
SCHOOL YEAR 2013/2014
(TWO MEASUREMENTS): DIMENSIONS
OF IDENTITY DEVELOPMENT VS. SHAME, GUILT, AND PRIDE

Key:

Identity statuses:

1. Identity diffusion: diffused diffusion, carefree diffusion
2. Identity moratorium: undifferentiated identity, ruminative moratorium
3. Formed identity: foreclosure, achievement

Dimensions of identity development:

1. EB – exploration in breadth
2. ED – exploration in depth
3. RE – ruminative exploration
4. CM – commitment making
5. IC – identification with commitment

Self-conscious emotions:

1. SH – shame
2. GU – guilt
3. PR – pride

Statistics: r – Pearson correlation coefficient; p – the level of significance;
 n – the number of students with a given identity status

Cohort 2: 2013/2014 – the first measurement (T1)										Cohort 2: 2013/2014 – the second measurement (T2)									
Status	Dimension					Status	Dimension												
	EB	ED	RE	CM	IC	SH	GU	PR		EB	ED	RE	CM	IC	SH	GU	PR		
EB	<i>r</i>	1	.521**	.638**	-.329	.221	-.019	.058	.171	<i>r</i>	1	.495**	.344**	-.028	.138	.204*	.254**	-.187*	
	<i>p</i>		.003	.000	.071	.231	.917	.757	.357	<i>p</i>		.000	.000	.730	.091	.012	.002	.021	
	<i>n</i>	31	31	31	31	31	31	31	31	31	151	151	151	151	151	151	151	151	
ED	<i>r</i>	.521**	1	.428*	-.071	.273	.154	.171	.096	<i>r</i>	.495**	1	.278**	-.069	.184*	.234*	.257**	-.111	
	<i>p</i>	.003		.016	.704	.137	.408	.359	.606	<i>p</i>	.000	.001	.397	.023	.004	.001	.176		
	<i>n</i>	31	31	31	31	31	31	31	31	151	151	151	151	151	151	151	151		
RE	<i>r</i>	.638**	.428*	1	-.760**	-.185	-.026	.019	-.003	<i>r</i>	.344**	.278**	1	-.575**	-.031	.377**	.350**	-.225**	
	<i>p</i>	.000	.016	.000	.320	.889	.918	.989		<i>p</i>	.000	.001	.000	.709	.000	.000	.000	.005	
	<i>n</i>	31	31	31	31	31	31	31	31	151	151	151	151	151	151	151	151		
CM	<i>r</i>	-.329	-.071	-.760**	1	.490**	.087	.057	.135	<i>r</i>	-.028	-.069	-.575**	1	.322**	-.211**	-.139	.151	
	<i>p</i>	.071	.704	.000	.005	.643	.761	.470		<i>p</i>	.730	.397	.000	.000	.009	.089	.064		
	<i>n</i>	31	31	31	31	31	31	31	31	151	151	151	151	151	151	151	151		
IC	<i>r</i>	.221	.273	-.185	.490**	1	.161	.217	.196	<i>r</i>	.138	.184*	-.031	.322**	1	-.166*	-.098	.218**	
	<i>p</i>	.231	.137	.320	.005	.387	.241	.291		<i>p</i>	.091	.023	.709	.000	.041	.230	.007		
	<i>n</i>	31	31	31	31	31	31	31	31	151	151	151	151	151	151	151	151		
SH	<i>r</i>	-.019	.154	-.026	.087	.161	1	.413*	-.211	<i>r</i>	.204*	.234**	.377**	-.211**	-.166*	1	.803**	-.494**	
	<i>p</i>	.917	.408	.889	.643	.387	.021	.254		<i>p</i>	.012	.004	.000	.009	.041	.000	.000	.000	
	<i>n</i>	31	31	31	31	31	31	31	31	151	151	151	151	151	151	151	151		
GU	<i>r</i>	.058	.171	.019	.057	.217	.413*	1	-.100	<i>r</i>	.254**	.257**	.350**	-.139	-.098	.803**	1	-.523**	
	<i>p</i>	.757	.359	.918	.761	.241	.021	.594		<i>p</i>	.002	.001	.000	.089	.230	.000	.000	.000	
	<i>n</i>	31	31	31	31	31	31	31	31	151	151	151	151	151	151	151	151		
PR	<i>r</i>	.171	.096	-.003	.135	.196	-.211	-.100	1	<i>r</i>	-.187*	-.111	-.225**	.151	.218**	-.494**	-.523**	1	
	<i>p</i>	.357	.606	.989	.470	.291	.254	.594		<i>p</i>	.021	.176	.005	.064	.007	.000	.000	.000	
	<i>n</i>	31	31	31	31	31	31	31	31	151	151	151	151	151	151	151	151		

Diffused diffusion

Appendix 4.

CORRELATION MATRICES FOR THE THIRD
COHORT OF FIRST-GRADE STUDENTS –
SCHOOL YEAR 2014/2015

(TWO MEASUREMENTS): DIMENSIONS
OF IDENTITY DEVELOPMENT VS. SHAME, GUILT, AND PRIDE

Key:

Identity statuses:

1. Identity diffusion: diffused diffusion, carefree diffusion
2. Identity moratorium: undifferentiated identity, ruminative moratorium
3. Formed identity: foreclosure, achievement

Dimensions of identity development:

1. EB – exploration in breadth
2. ED – exploration in depth
3. RE – ruminative exploration
4. CM – commitment making
5. IC – identification with commitment

Self-conscious emotions:

1. SH – shame
2. GU – guilt
3. PR – pride

Statistics: r – Pearson correlation coefficient; p – the level of significance;
 n – the number of students with a given identity status

Cohort 3: 2014/2015 – the first measurement (T1)													Cohort 3: 2014/2015 – the second measurement (T2)												
Status	Dimension			EB	ED	RE	CM	IC	SH	GU	PR	Status	Dimension			EB	ED	RE	CM	IC	SH	GU	PR		
	<i>r</i>	<i>p</i>	<i>n</i>	1	.462**	.307**	.134	.279**	.071	.086	-.064		<i>r</i>	<i>p</i>	<i>n</i>	1	.381**	.568**	-.157	-.067	.149	.225*	-.158		
EB				108	108	108	108	108	108	108	108	EB				93	93	93	.133	.524	.154	.030	.131		
	<i>r</i>	<i>p</i>	<i>n</i>	.462**	1	.256**	.170	.452**	.059	.040	-.031		<i>r</i>	<i>p</i>	<i>n</i>	.381**	1	.404**	.246*	-.019	.096	.027			
ED				108	108	108	108	108	108	108	108	ED				93	93	93	.788	.017	.859	.362	.797		
	<i>r</i>	<i>p</i>	<i>n</i>	.307**	.256**	1	-.394**	.042	.212*	.180	-.182		<i>r</i>	<i>p</i>	<i>n</i>	.568**	.404**	1	-.344**	-.159	.191	.277**	-.107		
RE				108	108	108	108	108	108	108	108	RE				93	93	93	.001	.129	.067	.007	.310		
	<i>r</i>	<i>p</i>	<i>n</i>	.134	.170	-.394**	1	.369**	-.061	.080	.014		<i>r</i>	<i>p</i>	<i>n</i>	-.157	.028	-.344**	1	.354**	-.223*	-.174	.081		
CM				108	108	108	108	108	108	108	108	CM				93	93	93	.000	.032	.095	.439			
	<i>r</i>	<i>p</i>	<i>n</i>	.279**	.452**	.042	.369**	1	-.210*	-.056	.203*		<i>r</i>	<i>p</i>	<i>n</i>	-.067	.246*	-.159	.354**	1	-.346**	-.050	.293**		
IC				108	108	108	108	108	108	108	108	IC				93	93	93	.000	.032	.095	.004			
	<i>r</i>	<i>p</i>	<i>n</i>	.071	.059	.212*	-.061	-.210*	1	.610**	-.486**		<i>r</i>	<i>p</i>	<i>n</i>	.149	-.019	.191	-.223*	-.346**	1	.611**	-.318**		
SH				108	108	108	108	108	108	108	108	SH				93	93	93	.032	.001	.000	.002			
	<i>r</i>	<i>p</i>	<i>n</i>	.468	.546	.028	.530	.029	.000	.000	.000		<i>r</i>	<i>p</i>	<i>n</i>	.154	.859	.067	.032	.001	.000	.000	.002		
GU				108	108	108	108	108	108	108	108	GU				93	93	93	.095	.633	.000	.977			
	<i>r</i>	<i>p</i>	<i>n</i>	.086	.040	.180	.080	-.056	.610**	1	-.211*		<i>r</i>	<i>p</i>	<i>n</i>	.225*	.096	.277**	-.174	-.050	.611**	1	-.003		
PR				108	108	108	108	108	108	108	108	PR				93	93	93	.081	.293**	-.318**	-.003	1		
	<i>r</i>	<i>p</i>	<i>n</i>	.508	.749	.059	.882	.035	.000	.028			<i>r</i>	<i>p</i>	<i>n</i>	.131	.797	.310	.439	.004	.002	.977			
	<i>r</i>	<i>p</i>	<i>n</i>	108	108	108	108	108	108	108	108		<i>r</i>	<i>p</i>	<i>n</i>	93	93	93	93	93	93	93	93		

Diffused diffusion

Diffused diffusion

	<i>r</i>	1	.319**	.285**	-.111	.069	-.013	.028	-.028
EB	<i>p</i>	.001	.004	.268	.493	.901	.782	.781	
	<i>n</i>	101	101	101	101	101	101	101	101
	<i>r</i>	.319**	1	.298**	-.176	.007	.156	.143	-.131
ED	<i>p</i>	.001	.002	.078	.946	.120	.153	.191	
	<i>n</i>	101	101	101	101	101	101	101	101
	<i>r</i>	.285**	.298**	1	-.433**	-.218*	-.027	.211*	-.154
RE	<i>p</i>	.004	.002	.000	.029	.788	.034	.125	
	<i>n</i>	101	101	101	101	101	101	101	101
	<i>r</i>	-.111	-.176	-.433**	1	.461**	-.005	-.071	-.014
CM	<i>p</i>	.268	.078	.000	.000	.963	.479	.887	
	<i>n</i>	101	101	101	101	101	101	101	101
	<i>r</i>	.069	.007	-.218*	.461**	1	-.174	-.131	.231*
IC	<i>p</i>	.493	.946	.029	.000	.082	.191	.020	
	<i>n</i>	101	101	101	101	101	101	101	101
	<i>r</i>	-.013	.156	-.027	-.005	-.174	1	.604**	-.479**
SH	<i>p</i>	.901	.120	.788	.963	.082	.000	.000	.000
	<i>n</i>	101	101	101	101	101	101	101	101
	<i>r</i>	.028	.143	.211*	-.071	-.131	.604**	1	-.313**
GU	<i>p</i>	.782	.153	.034	.479	.191	.000	.001	
	<i>n</i>	101	101	101	101	101	101	101	101
	<i>r</i>	-.028	-.131	-.154	-.014	.231*	-.479**	-.313**	1
PR	<i>p</i>	.781	.191	.125	.887	.020	.000	.001	
	<i>n</i>	101	101	101	101	101	101	101	101

	<i>r</i>	1	.322**	.322**	-.007	.047	.211*	.073	.013
EB	<i>p</i>	.000	.000	.942	.618	.025	.443	.895	
	<i>n</i>	114	114	114	114	114	113	113	113
	<i>r</i>	.322**	1	.057	.058	.137	.120	.038	-.007
ED	<i>p</i>	.000	.546	.542	.147	.205	.692	.941	
	<i>n</i>	114	114	114	114	114	113	113	113
	<i>r</i>	.322**	.057	1	-.409**	-.286**	.209*	.173	-.220*
RE	<i>p</i>	.000	.546	.000	.002	.026	.066	.019	
	<i>n</i>	114	114	114	114	114	113	113	113
	<i>r</i>	-.007	.058	-.409**	1	.646**	.030	.055	.229*
CM	<i>p</i>	.942	.542	.000	.000	.751	.560	.015	
	<i>n</i>	114	114	114	114	114	113	113	113
	<i>r</i>	.047	.137	-.286**	.646**	1	-.177	-.089	.353**
IC	<i>p</i>	.618	.147	.002	.000	.061	.350	.000	
	<i>n</i>	114	114	114	114	114	113	113	113
	<i>r</i>	.211*	.120	.209*	.030	-.177	1	.628**	-.335**
SH	<i>p</i>	.025	.205	.026	.751	.061	.000	.000	.000
	<i>n</i>	113	113	113	113	113	113	113	113
	<i>r</i>	.073	.038	.173	.055	-.089	.628**	1	-.338**
GU	<i>p</i>	.443	.692	.066	.560	.350	.000	.000	
	<i>n</i>	113	113	113	113	113	113	113	113
	<i>r</i>	.013	-.007	-.220*	.229*	.353**	-.335**	-.338**	1
PR	<i>p</i>	.895	.941	.019	.015	.000	.000	.000	.000
	<i>n</i>	113	113	113	113	113	113	113	113

* correlation significant at $p = .05$ (two-tailed), ** correlation significant at $p = .01$ (two-tailed)

